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Southern California's New Architecture

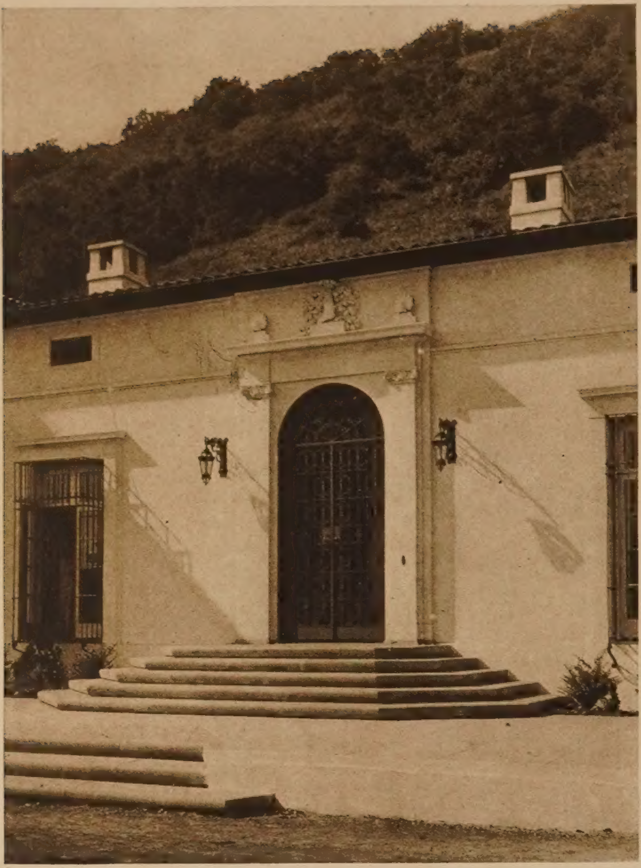
By Elmer Grey

From porch, residence, J. L. Rice, Pasadena, California.

ANY one who would journey to southern California now after not having been there for a few years would, if of a discriminating turn of mind, be struck with the latest development of style in many of its buildings. Especially during the last three or four years, many, if not most, of the important buildings built there have been done in what, for want of a better term, is called "Spanish." A similar tendency was, of course, noticeable prior to that time which had its beginnings in the inspiration of the missions; but it received a fresh, a different, and a much more powerful impetus with the designing of the World's Fair buildings at San Diego in Spanish colonial. This present development of style is not mission, though somewhat akin to it in derivation; it is an adaptation of the Spanish colonial architecture of Mexico, and of original Spanish architecture, to the needs of that portion of the United States which has much the same traditions and climate as has a large part of Mexico. So wide-spread has been the demand for it recently among those who have built fine homes and other important structures in southern California that it bears promise of being one of the prevailing types of architecture of the Southwestern States, in the same way in which colonial and its variations are typical of the Atlantic States.

This is, of course, as it should be in more ways than one. When (before the war) we travelled in Europe, the one thing which lent interest to our wanderings and charm to any particular locality was the distinctive character which that locality had differentiating it from all others. In England it was among other things the thatched roofs, the brick or half-timbered gables, and the lovely gardens which captivated us. In France it was similar features perhaps but with an entirely different flavor given them by a different people. And so in Belgium, in Holland, or elsewhere, it was the individual character of the town or landscape which pleased us most and held our attention.

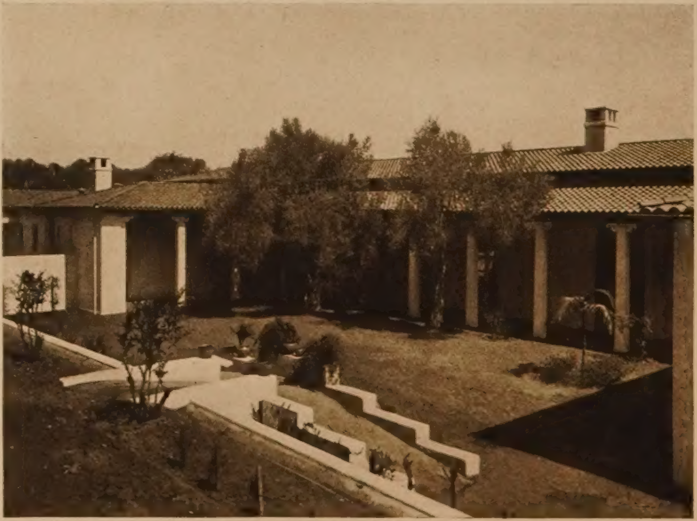
Southern California's traditions, her climate, and her scenery, all suggest a different type of architecture from that of the rest of the United States. When Cabrillo landed in San Diego harbor and Father Junipero Sierra established in San Diego the first Spanish mission, they did more there than mark the inception of a great religious movement; they touched the chord of a natural theme for the architecture of a large portion of the United States. Its variations have been played with varying success in the past, and they may still have further vicissitudes before them, but the original theme, touched again at Santa Barbara, again at San Juan Capistrano and wherever the missions with their deep reveals, soft-red tiled roofs, and lovely walled-in gardens were built, will always remain a powerful influence upon the architecture of this portion of our country. When Americans began to populate California they used the mission style almost exclusively for a while, but more often than not they handled it poorly, copying its inconsequential mannerisms, such as plastered walls and curved gable lines rather than its stronger and more essential features such as deep reveals, well-planned patios, and good proportions; and as a consequence their interpretation of it fell into disrepute. Men of taste, even those who admired the original missions, finally felt obliged to speak of the so-called mission style apologetically. Some kind of substitute was therefore demanded by many and the Italian style has been much used for the purpose. This is largely justified by the fact that Italy has much the same climate and scenery as has southern California, and also by the fact that the root of much original Spanish work was Italian. But while Italian architecture often sets extremely well in California, it is rather inflexible in plan, and also it is somewhat too formal in appearance to hold its own for long as a predominating style there. The Spanish, on the other hand, is equally amenable either to formal or informal plans, large or small houses, and often possesses a certain joyousness, suggested by its florid aspect, which finds a ready response in the far-western temperament. It required but the emergence of the San Diego Exposition buildings in Spanish colonial to fan these somewhat obscure characteristics into a definite and popular flame. Soon after the exposition opened, certain wealthy builders of Santa Barbara and Pasadena, men also of taste, ordered houses designed in Spanish colonial. This influential initiative started a wave of the style throughout southern California. Whereas Santa Barbara's residence section five years ago had scarcely a building suggesting the Spanish, to-day it has dozens of large and important structures so designed. In the town of Nordhoff an entire business street was camouflaged with a Spanish arcade built in front of rather poor-looking frame structures and covering the sidewalk, while the town-hall and post-office were designed to match. Schools, college groups, railroad-stations, and churches followed the vogue, and the progress of the



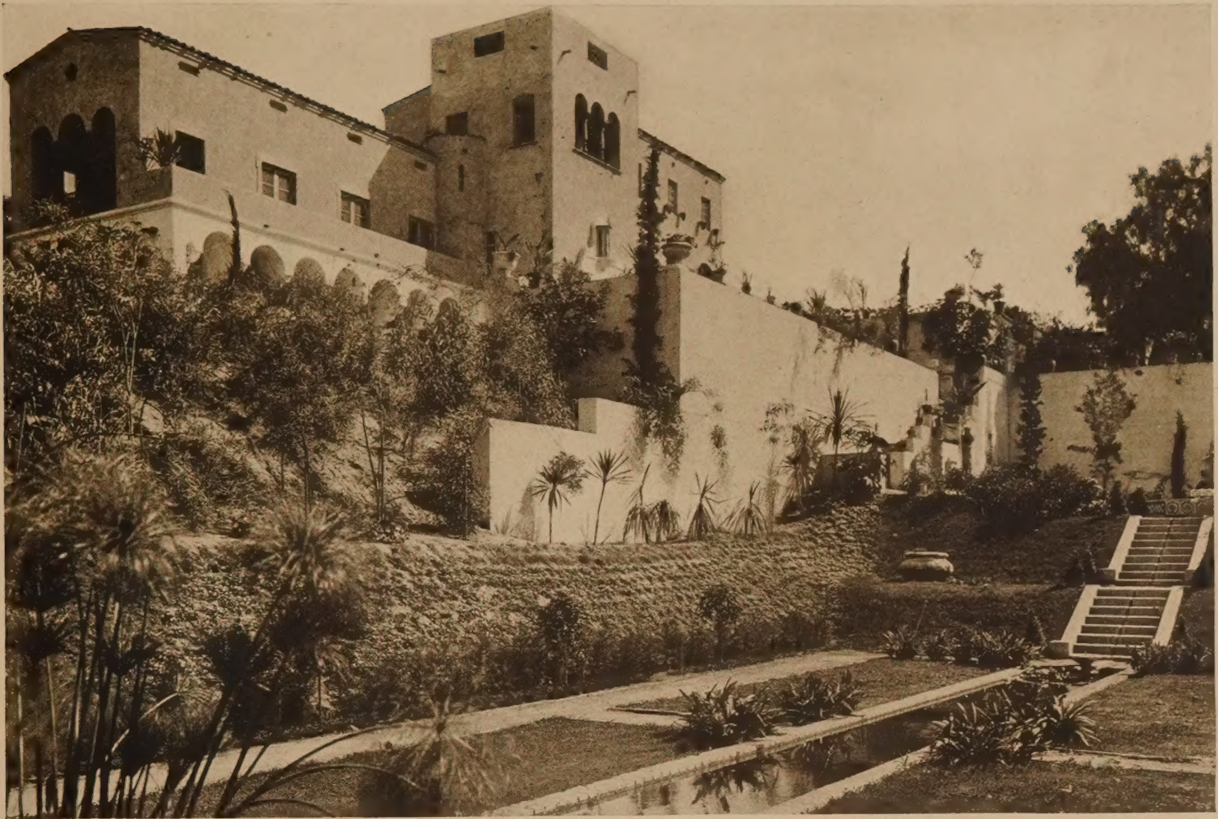
Main entrance, residence, J. H. Pershine, Santa Barbara, Cal. Myron Hunt, Architect. The crest over the door is taken from the authentic coat of arms of the owner, granted by the King of Spain.

style, only temporarily arrested by the war, has been already resumed with new vigor.

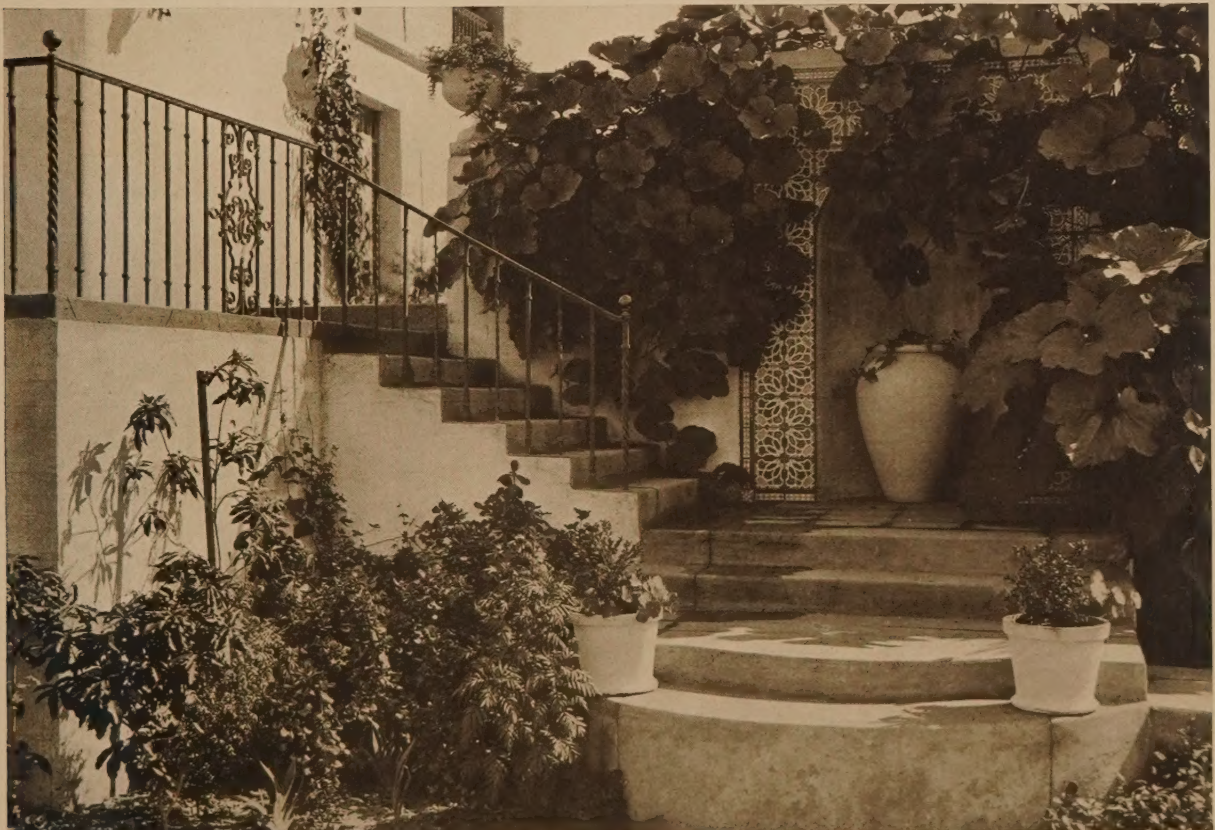
One of the most interesting houses of the type and by far the most individual is that of Mr. Julian Eltinge, of Los Angeles. It is situated on the top of a hill so steep that an automobile will scarcely climb it, and upon arriving at the apex of the hill one has to descend for a short distance at an even steeper grade to enter the property. There is the wisest of methods in this choice of location, however, for the grounds thus overlook a beautiful body of fresh water called Silver Lake and a lovely surrounding stretch of hilly countryside and distant mountains. Because of this unusual situation, the house, although but twenty minutes' ride from the centre of the city, seems removed therefrom many miles. The grounds have a high stucco wall around them, and, after passing through the entrance-gates, one enters a forecourt the left side of which rises steeply, the slope being planted with aloes, cacti, and similar plants indigenous to California. The opposite side of the forecourt, bounded by a low wall upon which have been placed many potted plants in ojas and similar Spanish receptacles, looks out over Silver Lake. Beneath it, at a much lower level, is another portion of the garden containing a pool running almost its entire length. The house is striking in appearance, partially on account of the unusual texture of its stucco walls and the highly successful use of strong color upon them, but largely because of the extremely picturesque composition of its masses. The stucco walls are rough in texture but not in the usual way; they might better be described as undulating in surface. Plasterers ordinarily use a tool called a darby, consisting of a long strip of wood, which is dragged over the surface of the plaster when it is soft, thus levelling it to a perfectly even surface. The use of this tool was here omitted, the character of the hand-work of the trowel being thus better preserved and a much more interesting texture secured. The first story of the building is ivory-white in color, the second a dull half-salmon, half-orange red, and the window frames and sash are a dull blue. The main floor is about a story's height above the level of the forecourt, and that part of it first seen as one approaches juts out with a bold overhang supported upon huge, mediæval-looking corbels. The main entrance is farther on, and over its centre rises a square tower having a recessed balcony in the story above, the openings of which are divided by columns decorated in polychrome, and the recessed walls of which are of a deeper orange than those outside. The entrance-door, also decorated in polychrome, is reached by two flights of steps, and the platform dividing them leads to another portion of the garden at a still higher level. Upon this platform is a wall fountain set in a niche and embellished with gayly colored Spanish tile, around which Mr. Eltinge has trained a squash-vine with its enormous leaves and yellow flowers. Upon entering the house the hall is seen to be circular in form, and a winding brick staircase with iron hand-rail leads to the main floor above. The ceiling of this hall has been vaulted and has been decorated in a way which makes it one of the noteworthy features of the house. A painter working on the job had asked permission to do this decorating by the use of allegorical figures. So startling a suggestion from one who was not known to be an artist was at first parried by the architect, and the owner happened to be away. The man persisted, and was finally allowed to make a sample panel. He had come West originally to help with the decoration of the San Francisco fair, and the result of his panel was so wonderfully effective that he was told to complete the ceiling. Upon the return of the owner he was also engaged to do similar work elsewhere, including a much larger ceiling of the living-room. He is Mr. Martin Syvertsen, and his work, characterized by exceptionally good color and decorative



The patio, residence, J. H. Pershine, Santa Barbara, Cal.



RESIDENCE.



NICHE ON STEPS TO ENTRANCE.

Pierpont Davis, Architect.

RESIDENCE, JULIAN ELTINGE, LOS ANGELES, CAL.

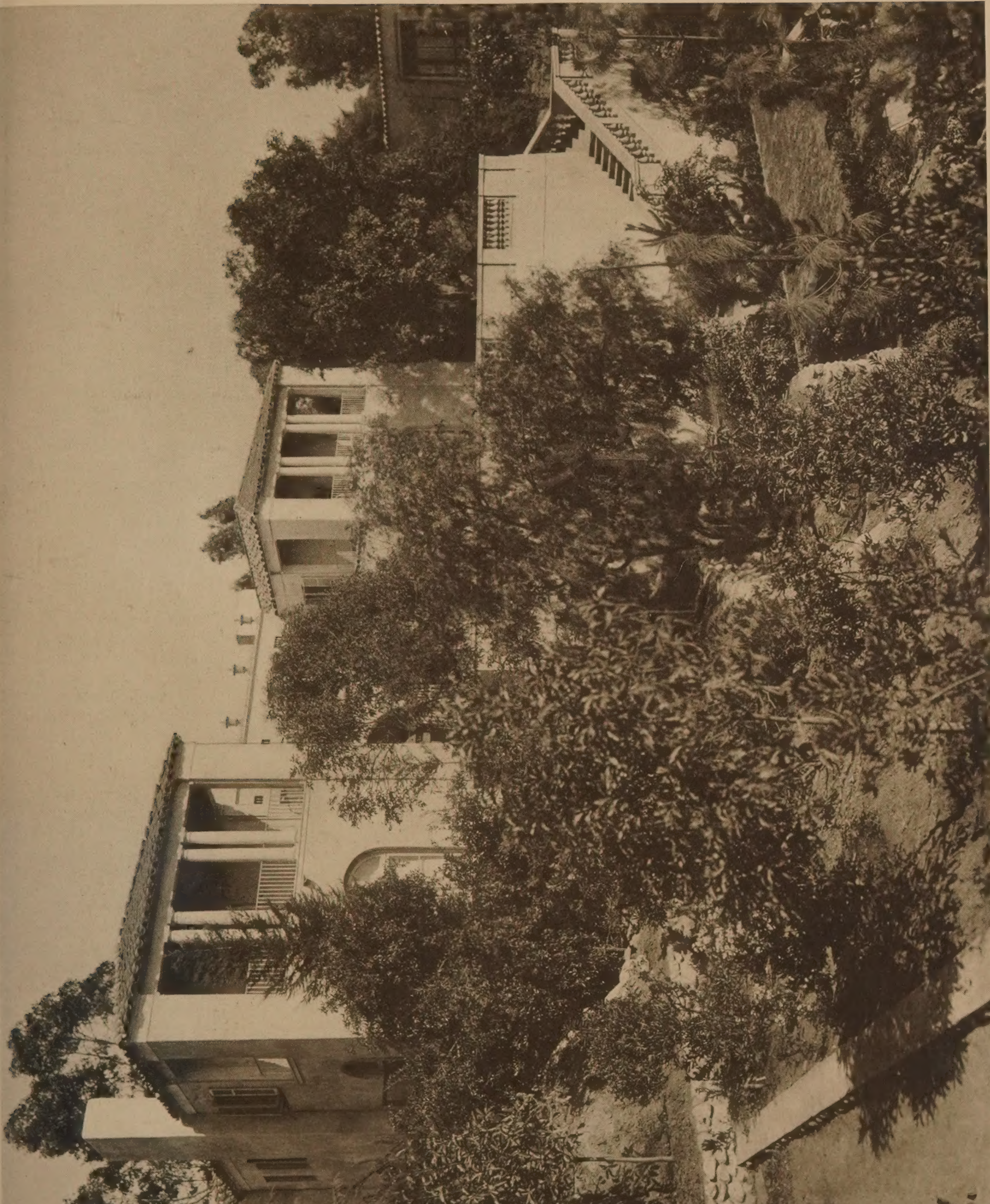
Fireplace, Santa Barbara Country Club. Bertram G. Goodhue, Architect.

effect, contains figures which, while not in any sense so pretentious, nevertheless recall some of those of Michael Angelo's in the Sistine Chapel, and they have been washed down to appear as though worn and mellowed by age. The plastered walls of the hall and living-room are colored to harmonize with the ceilings, and the texture of these walls as well as those of the rest of the interior has been done in a manner similar to those of the outside of the house, using no darby and allowing the trowel-marks to show. This unusual texture effect constitutes one of the noticeably successful features of the interior.

The floors of the house, instead of being made and treated in the ordinary manner, with narrow pieces of polished hardwood, are constructed of boards six, eight, and ten inches wide, which have been scraped relatively smooth with a scraper, but not sanded or polished. This adds another touch of handwork and holds a corresponding interest.

It must not be supposed that these unusual methods are merely those of a man who has wished to do the eccentric in building operations. They have, it is true, been carried somewhat further here than in most houses, as becomes a bachelor actor and artist who loves beautiful things and knows how to compose them in daring and unusual combinations, but they are also typical of methods employed in lesser ways in many southern California houses planned in this style; and they represent a movement in connection with it toward a freer use of building materials. In the art of painting there is a certain school the adherents of which paint with fine brushes and with faces close to the canvas, in order to secure minutely perfect results, and another in which coarser brushes are used, and they look at it from a distance to secure bolder technic. These building methods may be likened unto the latter school of painters. They are not as precise or as careful as those more commonly used, but there is a rugged virility about them not present in the others. They get back to the methods of mediæval days, the vigorous hand-work effects of which are prized to this day. It has been said of Mr. Eltinge's house that it is, on the face of it, the home of an actor and would not be suitable for any one else. This may in a measure be true, and should be true, for the house should suit the man; but there is also another fact regarding it. It is also the home of a master artist who unreservedly placed his work in the hands of a clever architect and an equally capable decorator. Without such a triple combination of unusual ability no such home, at once unique and splendidly harmonious, could have been produced.

Living-room window, residence, Mrs. E. M. Fowler, Chino, Cal. Myron Hunt, Architect.



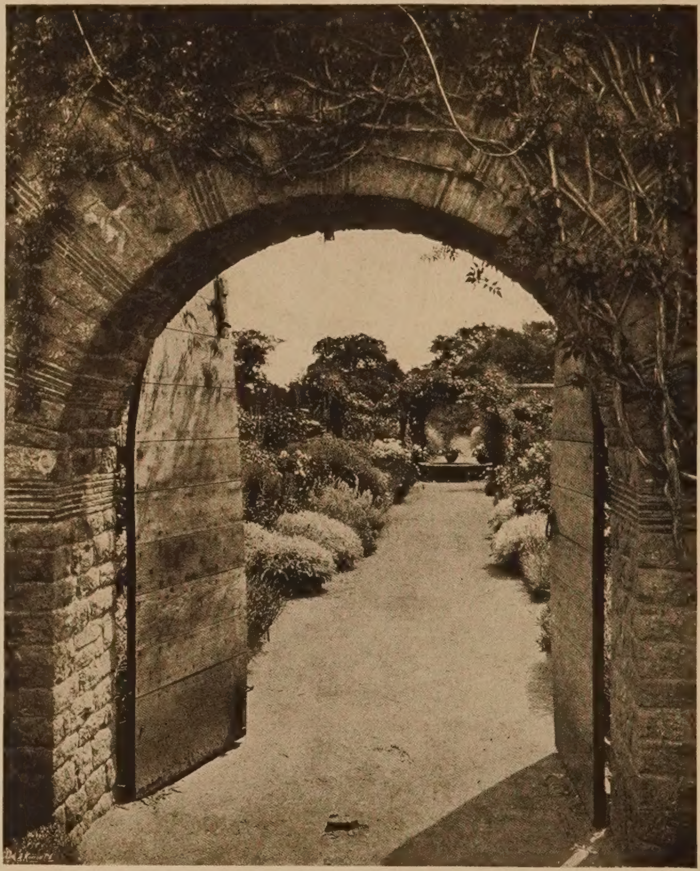
RESIDENCE, TODD FORD, PASADENA, CAL.

Reginald Johnson, Architect

Gardens and Their Ornament

Famous and Historic Examples of Entrance-Gates, Pergolas, Loggias, Steps and Balustrades, Bridges, etc.

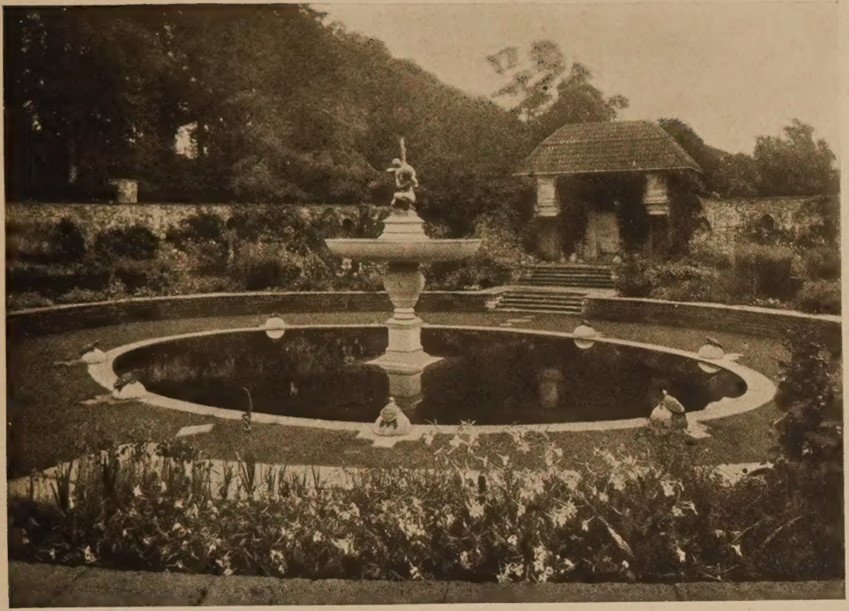
HOW much of the dignity and stately beauty and romance of the great English country and manor houses was and is due to their beautiful landscape settings, to their gardens and architectural and sculptural decorations of the garden! And the same comment applies to France and to Italy, especially to the latter country, from whence came so much of the inspiration that made the English gardens so notable. There have been many books written on the great gardens of the world, and hardly a garden in Italy or England but has had its commentators as well as its painters.


Flower borders in the kitchen-garden at Orchards, Surrey.

In early days in England the great houses were defensive castles shut away from approach by moats and thick-wall keeps and drawbridges, the castles of "Marmion," of mediæval robber bands and raiding barons. It was not until the time of Henry VIII that ornamental gardening in England began to assume importance and distinction. It was in Elizabeth's time that such great houses as Longleat, Woollaton, Hardwick, Kirby, and others were built, monuments alike to the tastes of their owners and to the skill and invention of contemporary architects.

The bridge at Blenheim Palace, Oxfordshire. By Vanbrugh.

"The more important garden ornaments, fountains, statues, vases, and other works of sculpture were not in general use in the gardens of the earlier Elizabethan houses; they were to come later, especially after the Restoration, when a great expansion of garden design took place. The magnificent gardens at Versailles had been laid out and built by the eminent garden architect Le Nôtre, some of whose designs were obtained for the additions and improvements carried out by Charles II at Hampton Court in 1669. It was then that the great canal was made and the avenues of Limes were planted that are still in existence. The same influence pervaded all England, and in the larger number of the great places laid out at the end of the seventeenth century will be found the long lines of clearing in woodland or of special planting, diverging from one point, probably the middle of the main terrace. These lines give reposeful dignity and that impression of vast space that was aimed at by the leading designers of the French school. In the nearer portion of the wood (the 'Bosquet' of the French, so familiar in the pictures of Boucher and his contemporaries) the trees were clipped to form walls of green, important points, such as inner junction of alleys, being punctuated by fountains or statues. These were the scenes of many brilliant summer fêtes in connection with the near gardens, that were also walled with high hedges close-shorn, decorated with niches for sculpture, and pierced with arches for the passage of the paths. But every style becomes liable to accretions that were not contemplated by its original founders and that are not always to its advantage; thus the French gardens of the eighteenth century were encumbered with a vast number of plants in pots placed along the terraces and garden-paths, a fashion justly ridiculed by the critics of the day. But even through the reign of William and Mary, when it was inevitable that much Dutch influence would be likely to prevail, the large,



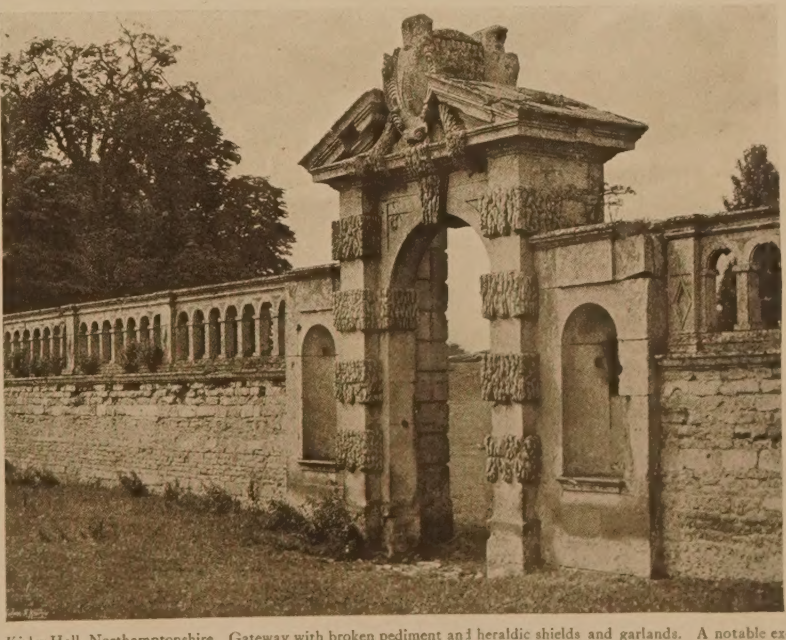
Fountain basin with a beautiful tazza of Belgian black marble and figure groups by Mr. John Hughes. The curb has eight bronze tortoises on half-round balls that spurt into the basin. Heywood, Queen's County, Ireland.

simple schemes of the French style, and especially the long, converging woodland avenues and their lesser counterparts in the garden, still held their own. John Rose, gardener to Charles II, worked under the direct instruction of Le Nôtre. He was followed by the partners London and Wise, who in the reign of William and Mary made further large additions to the gardens of Hampton Court. With Kent, before the middle of the eighteenth century, came the change to the landscape style, when all straight lines became abhorrent and the old ways of gardening were considered barbarous and only worthy of abolition. Then, near the middle of the century, came Lancelot Brown, who was widely employed and who continued to sweep away the older gardens with their parterres and trim hedges. Later in the century he was followed by Repton, and the same work went on.

"It was not till early in the nineteenth century that the principle of the Italian garden was again recognized as desirable, and straight, wide terraces with noble stairways and flowery parterres were laid out by Sir Charles Barry and succeeding designers. By this time the possibilities of the desire to make use of these led to what we know as the bedding system. By the middle of the century this way of gardening was practised to the exclusion of almost all other horticultural consideration. The hardy plants of the older gardens were not thought worthy of cultivation and were banished, and even the smallest places must have their beds of tender plants put out for the summer months only. Happily, a wholesome change again came about, and the last thirty years of the nineteenth century saw the old plants restored to favor and their number largely increased by the discoveries of botanical travellers. The interest of modern gardens has also been greatly extended by the use of the flora of alpine regions of the world and by the cultivation of the most beautiful of swamp and aquatic plants.

"But we have always to remember that it is to Italy that we have to look for examples of the highest development of ornamental features in connection with garden design. When we remember the conditions under which the great gardens of Italy came into being, it is no longer a matter of wonder that they should stand out as examples of excellence both in general design and in finished detail. For they were made at a time when there was that extraordinary revival of learning, and of development in all the branches of fine art, that we know as the Italian Renaissance of the fifteenth and sixteenth centuries. And when we read of a giant in architecture such as Bramante, the creator of St. Peter's and the Vatican, designing, with Raaffaele, the gardens of the papal palace and those of other princely houses, and of all the most exalted talent that could be found being employed upon the gardens of the many palaces and pleasure-houses of the courtly centres throughout the land; of the popes and princes of the great houses of Medici, Sforza, d'Este, and the rest, giving their personal encouragement and pouring out their wealth for the making of their gardens, one is the better prepared for their splendid design and endless variety of sculptured ornament. Numbers of the best of these gardens have perished altogether, and of those that still exist many are in a state of ruin, but enough remain to impress us with the grandeur of style and to delight us with admiration for the amazingly fertile invention and varied manner of treatment of the vast quantity of ornamental detail."

To-day the landscape architect is more than ever an important factor in the development and planning of the



Kirby Hall, Northamptonshire. Gateway with broken pediment and heraldic shields and garlands. A notable example of English Renaissance design and treatment. Possibly the work of Inigo Jones.

large country house, and he naturally goes back to study the methods and traditions of the Italian, English, and French masters of garden-making.

With the growth of the garden developed various conventional forms of ornament, such as Entrance-Gates, Steps and Balustrades, Urns and Sculptured Ornaments, Stone-Paved Courts and Garden-Seats, Loggias, Orangeries, Garden-Houses, Parterres, Sun-Dials, Pergolas, Canals, Ponds and Water Gardens, Bridges, Fountains and Wells, Flower-Borders, Wall-Gardens. Many of these were designed by men famous in the architectural world.

The Palladian bridge at Stone House, Buckinghamshire; middle eighteenth century.

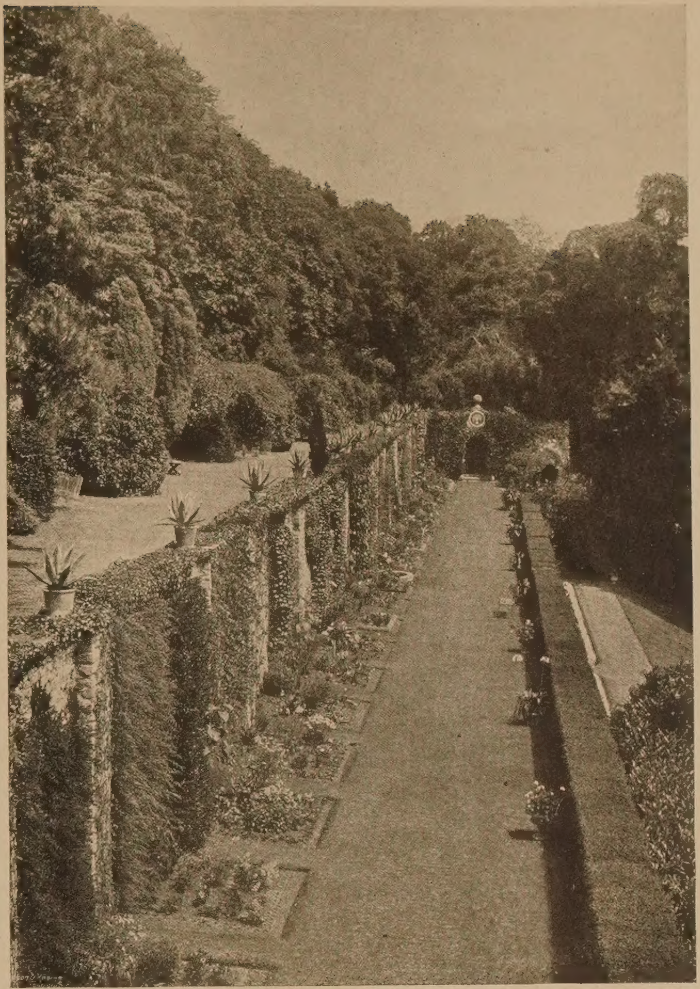
During the time of the English Renaissance, beginning in the days of Henry VIII, and reaching its full development in the succeeding Tudor and Jacobean reigns, the most usual form of gateway piers, whether of brick or stone, was a structure of square sections, finished with a cornice surmounted by a stone ball. In the more important examples, instead of a cornice only, there was often a whole entablature with a top ornament, which might be either a vase of lead or stone or some heraldic form or other sculptured figure. There were also architectural additions on either side, forming lesser gateways, or with niches only. The piers themselves often had niches in the lower portions, with sculptured ornament above, as in the flower-pot gates at Hampton Court. These niches were not necessarily for the placing of sculpture, but to gain the advantage of light and shade, an effect which is specially valuable where they occur in the flanking screens.

It was not till early in the seventeenth century that iron was used for any part of secular entrance-gates in England or, indeed, for any ornamental work connected with architecture other than ecclesiastical. In earlier times gates were of wood, strapped and bolted with iron, then of wooden framing with bars only of iron, and perhaps an iron cresting on the top. Gates of iron alone were only sparingly used in the time of Elizabeth and James I, and it was not till near the end of the seventeenth century that the finest examples of such gates were made in England, when that remarkable master in smith's work, Jean Tijou, was in England in the time of William and Mary.

Where garden ground slopes steeply there will necessarily be terraces, near or far apart, according to the degree of the gradient, and they will be connected by flights of steps. The gardens of the Italian Renaissance, many of which were built on hillsides, give us the finest examples of such terraced treatment. In those of the great villas the retaining wall was crowned by a balustrade with piers at intervals, each pier bearing an urn or vase or sculptured figure. The stairs, in noble, easy flights, and the landings, were also bordered by a balustrade with piers bearing ornaments. Where the hillside falls rapidly and the space does not allow the steps to come in the natural and obvious way, namely at a right angle to the terrace, the difficulty leads to a simple device, which makes the stairway all the more beautiful and important.

"If one may assume a typical arrangement of the entrance front of one of the fine old manor-houses of the sixteenth and seventeenth centuries, one may say that it stood anything from forty to seventy feet back from the road, with an enclosed forecourt either all paved or with flagged path with grass on each side; the path passing straight from the road to the front door. If the house stood on a slightly higher level there would be a few steps flanked on either side by a dwarf retaining wall at some point on the approach a good deal nearer the house than the front entrance, and this upper space would be entirely paved. In many cases these manor-house entrances have more recently been made into gardens, and one cannot but think that the gardening has often been overdone; for it is the safest rule to keep the entrance side quiet as to showy flowers, and to reserve the main display for the garden front of the house. Such a rule always works out well in practice, and, indeed, the use of such restraint involves no penance, for what is more delightful than Box, Bay, and Rosemary, Skimmia and Alpenrose, and the handsome ground greenery of Lent Hellebore, Megassa, and Acanthus? A large proportion of these green things with a few flowers only, such as Lilies, China Rose and Columbines, gives an appearance of dignity to an entrance-court such as would only be lessened by a more lavish use of flowers.

It is a different matter in the case of a paved place which is purely a garden court, that is, an enclosed space of actual flower-garden; for here the bright flowers are strictly in place.


High retaining walls, well clothed, at Cliveden Court, Somerset.

In many of the books that have been published about famous gardens, some of these ornamental details are in evidence, but no such comprehensive showing of garden ornament has heretofore been available as is gathered in Miss Jekyll's very notable book recently published.* It is a perfect cyclopædia on the subject, with a superb series of plates showing the most notable examples in the world.

"It is hoped that these illustrations of all kinds of garden ornament, now brought together for convenient study and comparison, may serve not only to quicken the interest in beautiful gardening but also to show how ornament may best be applied, according to the quality or calibre of any place. The descriptions and critical remarks are to be taken as suggestive rather than authoritative, but they will be useful in directing attention to the various objects and their judicious treatment, mainly as to the preservation of harmony and avoidance of incongruity. The overgrowth of good buildings by ivy and fast-growing climbing plants is pointed out in several instances; it is a matter that should receive much more attention, for ivy is answerable for the disintegration of much ancient masonry that ought to have been better guarded, and architecture of careful and refined character deserves better treatment than to be defaced or even obliterated by a rampant growth of common climbing plants."

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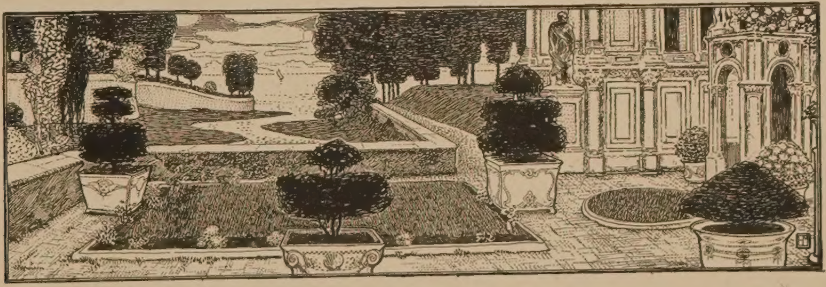
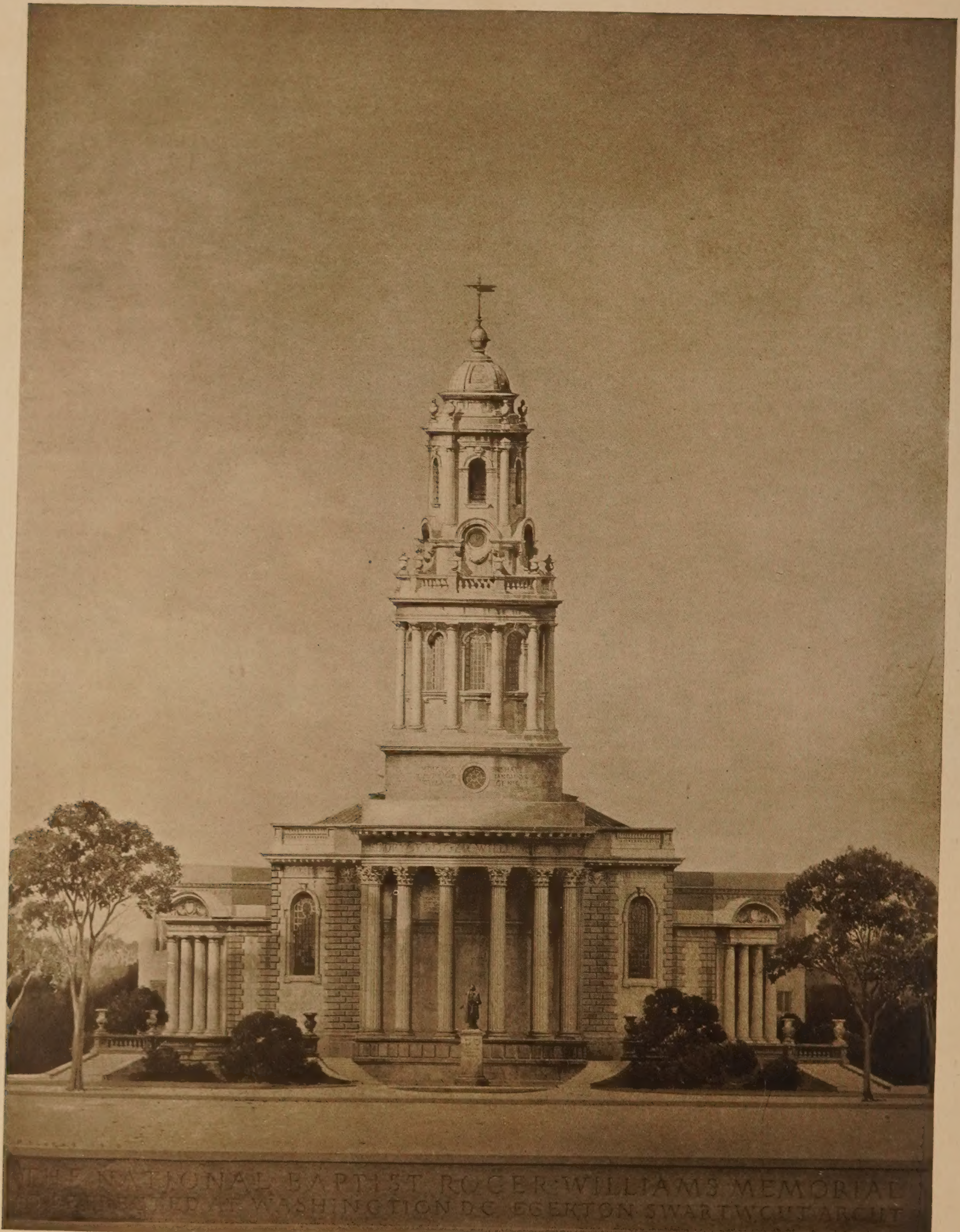
* "Garden Ornament," by Gertrude Jekyll. London: Published at the offices of *Country Life*, 20, Tavistock Street, Covent Garden, W. C. 2, and by George Newnes, Ltd., 8–11, Southampton Street, Strand, W. C. 2. New York: Charles Scribner's Sons, 1918. Large folio, cloth, with over 600 full-page and text illustrations, *net*, $28.00.




THE NATIONAL BAPTIST ROGER WILLIAMS MEMORIAL
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Editorial and Other Comment

To Build or Not to Build Now

A WELL-KNOWN Western architect writes: "I am firmly convinced that the one thing the building public wants to know is the cost of building to-day as compared to the next three to five years. If they could be assured that the cost will not drop within that time, there would be a tendency to proceed with the needed work."

This is the problem that confronts the architect everywhere, East and West, North and South. Arguing from analogy, going back to conditions that followed the Civil War, and anticipating the unprecedented demand for materials that will follow the resumption of general building, there doesn't seem to be any very hopeful prospect of any considerable reductions. In an address by Senator Calder, of New York, before the Builders' Association at Baltimore, he said:

"You are now met with the problem of whether one can afford to build under present prices. My own opinion is that prices will never return to where they were before, and, while there is bound to be a period of reconstruction serious to your trade, the ingenuity of the American builder is such that he can, by substituting materials that will answer the same purpose, obtain a lower price, and make up, to a certain extent, the difference in increased costs.

"There is a real demand to-day for housing all over the country, and if I were to offer advice it would be to urge builders to watch their opportunities, and be prepared to take advantage of them when they are presented."

This also seems to be expressive of a very general feeling. As an offset to high prices of materials there is, from another point of view, the compensating factor of greatly increased rentals. The Department of Labor at Washington is making a vigorous campaign to stimulate and encourage the building of homes, and from many offices come reports not only of the crying need for such building, but as well the hopeful sign of the drawing up of many plans. In most minds the real problem is the one of stabilizing the prices for labor. Cost of materials may be accepted more or less as a fixed charge, but the uncertainties concerning labor no one can at present predict. One of the most cheering optimists among the members of the architectural profession, Willis Polk, of San Francisco, is consistently preaching the doctrine of "build now." In New York, where there are many large undertakings awaiting development, the chief trouble seems to be, according to one authority, lack of co-operation on the part of financial interests.

"We have in the United States serious difficulty owing, principally, to the unwillingness of financial interests to co-operate in building projects with the material and labor market in its present condition. We are working on a total of nine industrial projects involving approximately 6,000 workmen's homes, to be carried out by private interests in various important industrial centres, but in each case we are hampered by the building loan situation. The only definite work we expect to carry out without delay is located outside of the United States."

A Further Word on War Memorials

AN editorial in *The Evening News*, of Newark, N. J., one of the most influential newspapers of the State, finds occasion to comment favorably upon the editorial in our February number, and to say that our suggestions for service memorials reflected the thoughts of many of their readers. In this connection we call attention to a circular issued by the American Federation of Arts, whose headquarters are in Washington, containing a list of appropriate memorials and the names of the members of the General Committee on War Memorials. It would be well for local committees planning memorials to send for this circular. It may help them to evade some of the mistakes that have been made in the past by zeal unenlightened with any trained judgment in matters of art. The annual meeting of the Federation in New York in May will be devoted to a discussion of various phases of the subject of war memorials, past and present.

No doubt the rapid growth of art museums throughout the country will have had a beneficial effect upon public taste, and there is a vast amount of expert advice available merely for the asking. It will be a pity if it is not called upon. The architects everywhere are ready to co-operate, and they should be consulted whenever the opportunity offers.

On the Education of the Architect

A PUBLICATION that comes to our desk with especial welcome is the "Bulletin of the Illinois Society of Architects," edited by Mr. F. E. Davidson. It is a live wire, and from its pages we derive not only pleasure but profit. From a recent number we take the following concrete suggestions. They put in condensed form a more detailed report on the question of architectural education:

"1. Affiliation with architects' offices, students to spend four months in accredited offices in superintendence and drafting.

"2. Affiliation with accredited construction companies, students to spend two months in estimating and superintendence.

"3. Extension of course to five years for architectural diploma, draftsman's diploma may be given at the end of four years.

"4. Present so-called Beaux Arts system of elaborately rendered plans and elevations to be changed.

"5. The orders and details to be studied full-size in pencil.

"6. All problems in design to be studied in perspective, as well as elevation, and presented in pencil with little rendering.

"7. Problems in design to be small and practical for the first four years, and studied in relationship to the materials used.

"8. All problems in design to be roughly dimensioned and annotated.

"9. The thesis to be a small practical problem, worked out in a complete set of working drawings with specifications attached, and to be presented in the second half of the fourth year.

"10. Antique, Mediæval, and Renaissance decorated forms to be studied only in connection with the History of Architecture.

"11. The subjects of Chemistry, Calculus beyond the elements, Physics, Applied Mechanics beyond Statics, Spherical Trigonometry, Analytical Geometry, to be omitted.

"12. Shade and Shadows as a science to be omitted, students to get their knowledge largely from nature.

"13. Study of ornament to be based on a study of nature, and indigenous and geometric forms.

"14. Interior Decorating to be taught with instruction in the nature of textiles, glass, ornamental iron, tiles, etc.

"15. Practical elementary Surveying to be taught, with simple field work.

"16. The design of industrial plants with modern method of unit multiplication and factory construction to be taught.

"17. A course in housing, with its social relationships, to be taught through lectures and reference reading.

"18. The science and history of City Planning to be given as an elective study.

"19. A course to be given in business promotion, showing sound methods of promoting and financing building operations.

"20. Extemporaneous speaking to be taught through practice in presenting building projects.

"21. Last, a general change in spirit to be awakened in the schools to the ultimate end of modernizing and Americanizing the education of the architect."

Our Great Need for Better Teaching of Industrial Art

A NEW era is dawning in the industrial arts field; war brought the opportunity. The war forced us to choose between aping Europe again now that the job over there is finished, or standing upon our own ability in the broad field of high-class industrial art production and furnishing Europe from here. The schools must get to work in this serious business. The general schools must make their work in drawing useful; the schools for manual craftsmen must be busier and harder at work than ever; the schools for teaching designers have the greatest task for they must assure for us fine design for production on a large scale. And for this great work, which must be got under way immediately, our present schools are hopelessly insufficient in number and individually inadequate to the task. We have not a half dozen; we need a hundred even now. Where are the great men who can see America's opportunities? Where are the educators that can lead and mould public opinion? Where are the long-headed manufacturers who have failed to regard schools as an asset yet who cry for designers now that Europe has called them back to defend the schools that trained them? Are there no giants among us who will assure the future of America in this field by acting at once? Let us have schools of industrial art, always more schools, and give them to us now!

Richard F. Bach,
Associate in Industrial Arts, Metropolitan Museum of Art.

Art in French Homes of the Eighteenth Century —M. de Ricci the Guest of the Architectural League

ON March 13th the Architectural League of New York gave a dinner to Seymour de Ricci of the French High Commission, now in the United States.

Monsieur de Ricci was selected for his art mission because of his well-known talents as a student of the industrial arts of France, and because of his knowledge of the history of Gallic home-making.

The subject for discussion, illustrated with lantern slides, was "Art in the French Homes of the Eighteenth Century," illustrating the history of the home-furnishing crafts in the days of Louis XV and Louis XVI, including the most characteristic examples of fine French craftsmanship applied to the making of furniture, textiles, porcelain and metal work.

The National Baptist Roger Williams Memorial

THE National Baptist Roger Williams Memorial is to be erected in Washington, D. C., on a triangular piece of property at the intersection of Sixteenth Street and Columbia Road. There is an existing building on the rear of the site, now used temporarily as a church, which will be altered and connected with the church proper, and will be utilized as a Sunday-school.

The church is to be a National Baptist Headquarters and a memorial to Roger Williams. A statue of him is one of the main features of the façade.

The interior of the church is circular in plan, although the building is polygonal on the exterior. It will seat approximately one thousand people.

Timely Slogans from the U. S. Dept. of Labor

Let's make America a better place in which to live. Build now the homes, churches, schools, and roads which the war stopped.

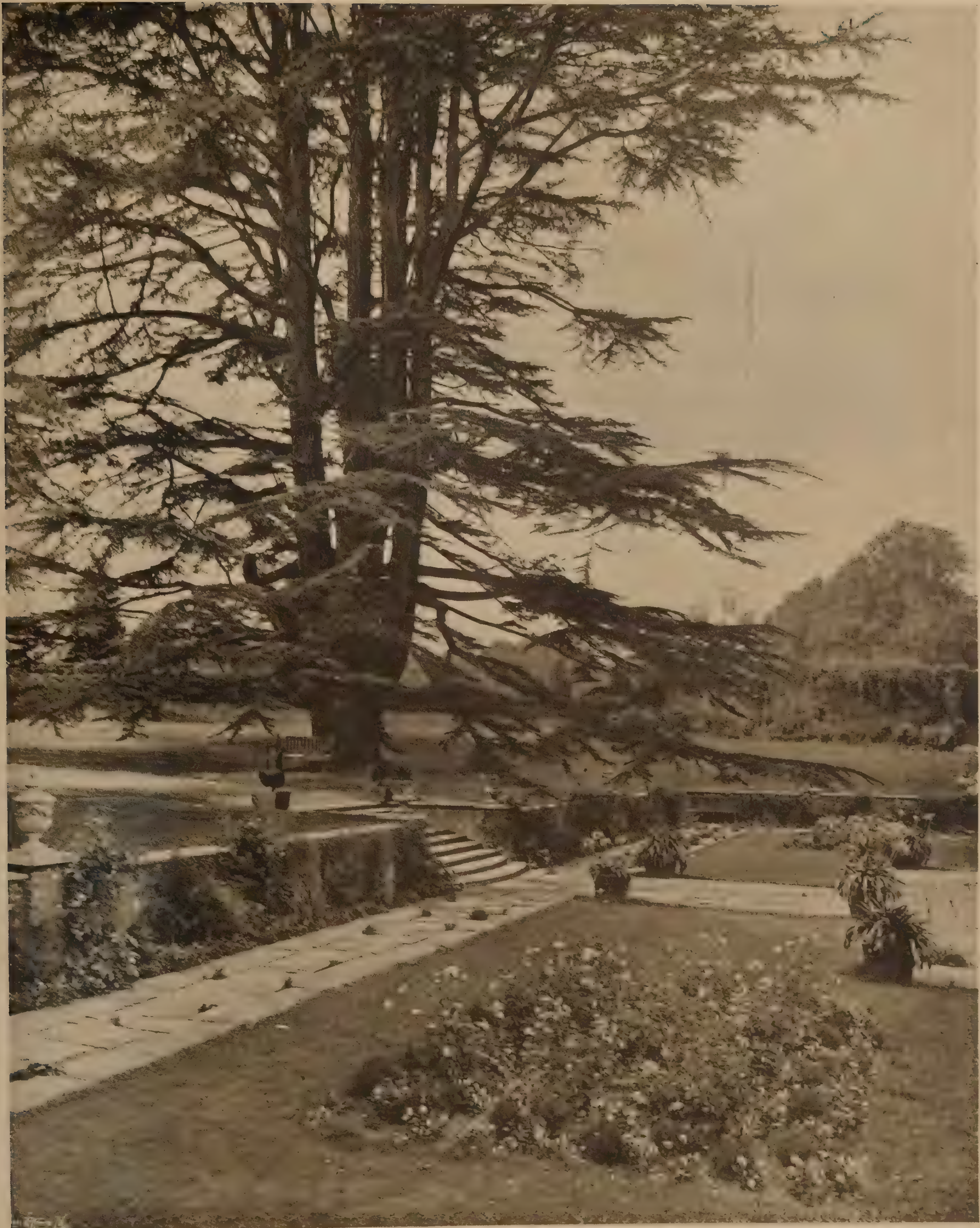
Farms, factories, mines, and furnaces must produce as well for peace as for war. Production is the key to Prosperity.

One of the best uses for money earned during the war is to set it to work on building a home of your own.

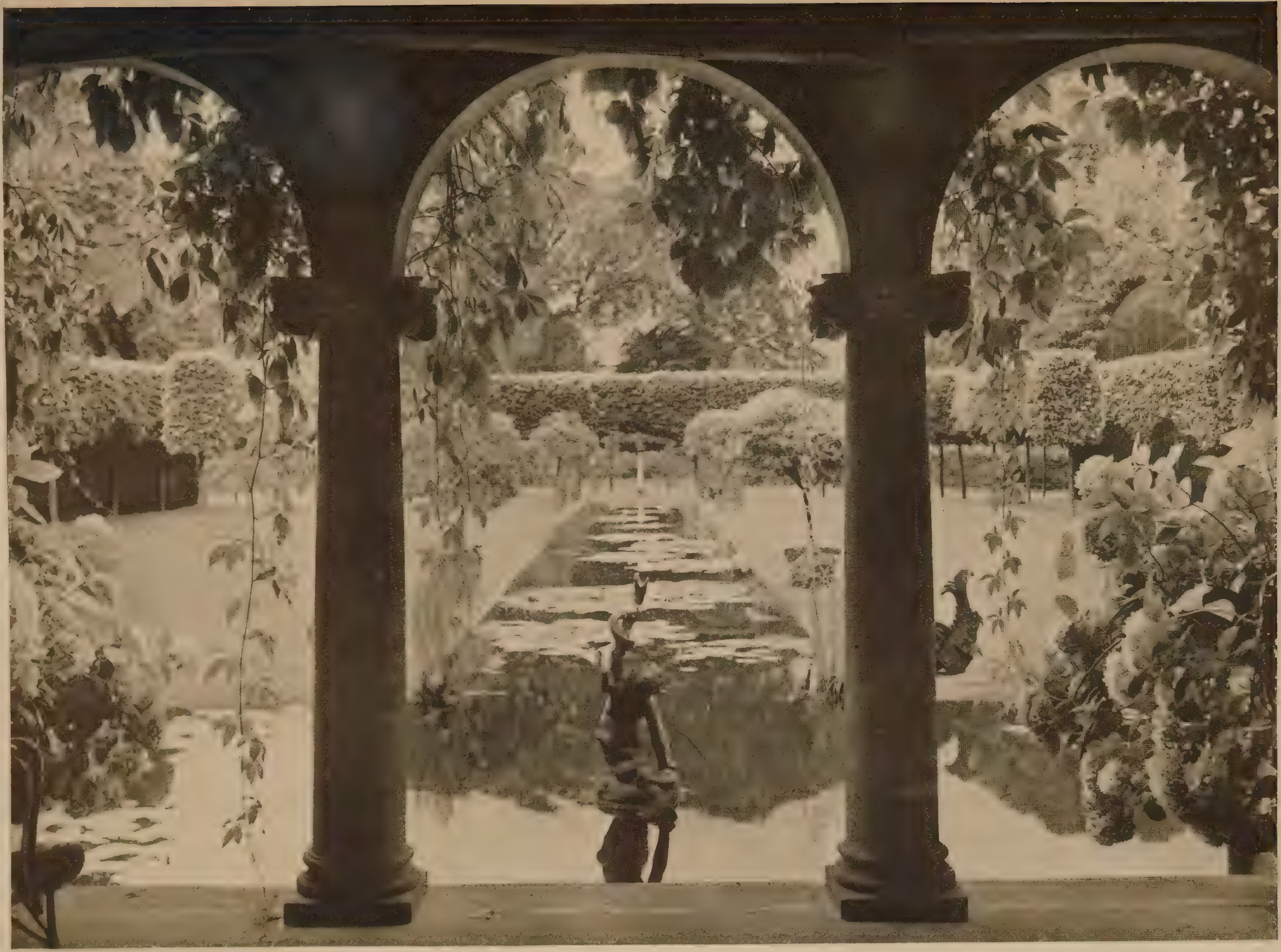
Build now that City Hall, Courthouse, Schoolhouse, Church, Factory, Memorial. Build Now.

Stinginess puts savings in a sock—Thrift puts savings into a home.

Construct now for a greater and still happier America.

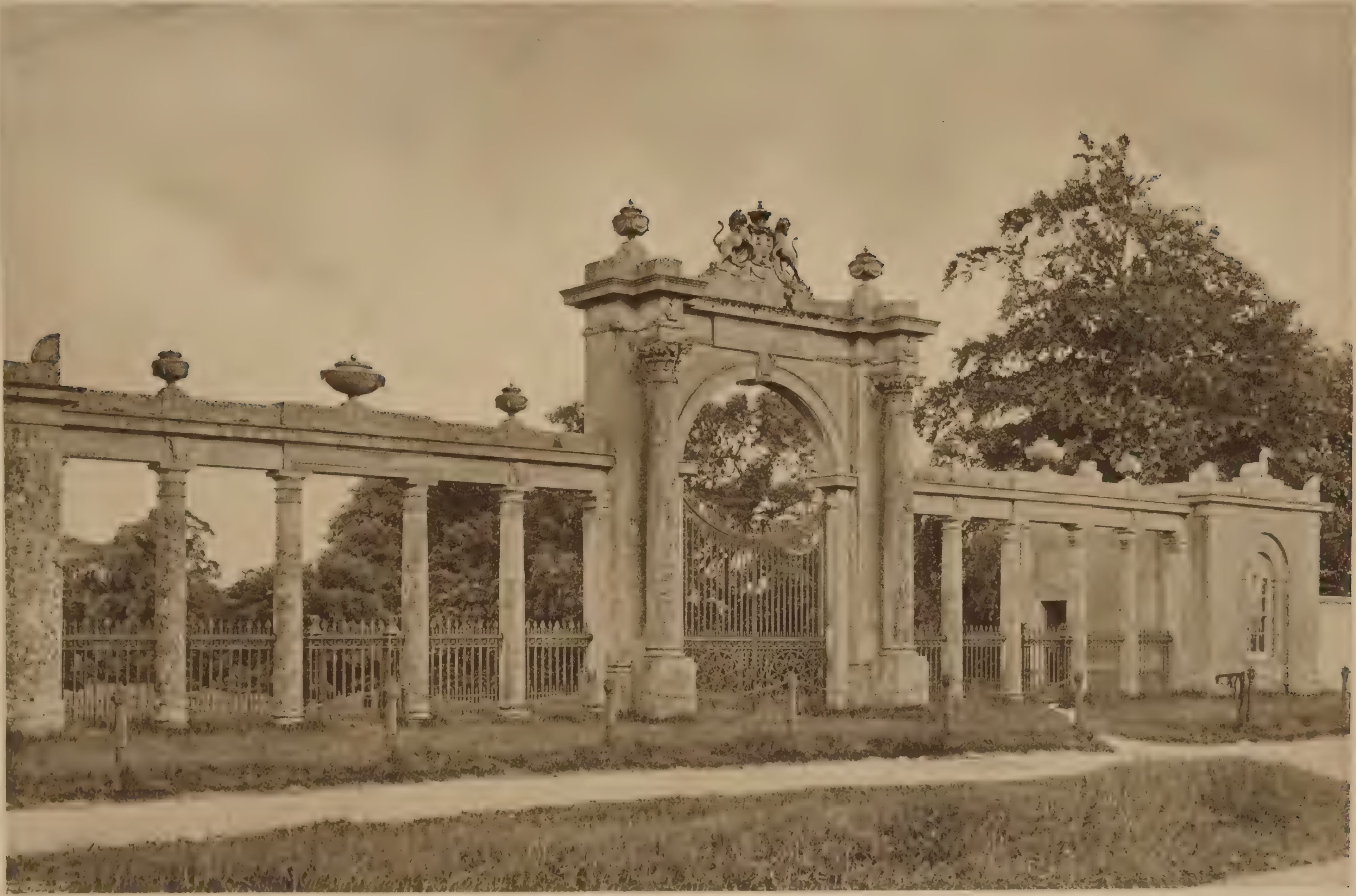


PAVED PATHS AND PLATFORM IN THE SUNK GARDEN AT EWHURST, HAMPSHIRE.

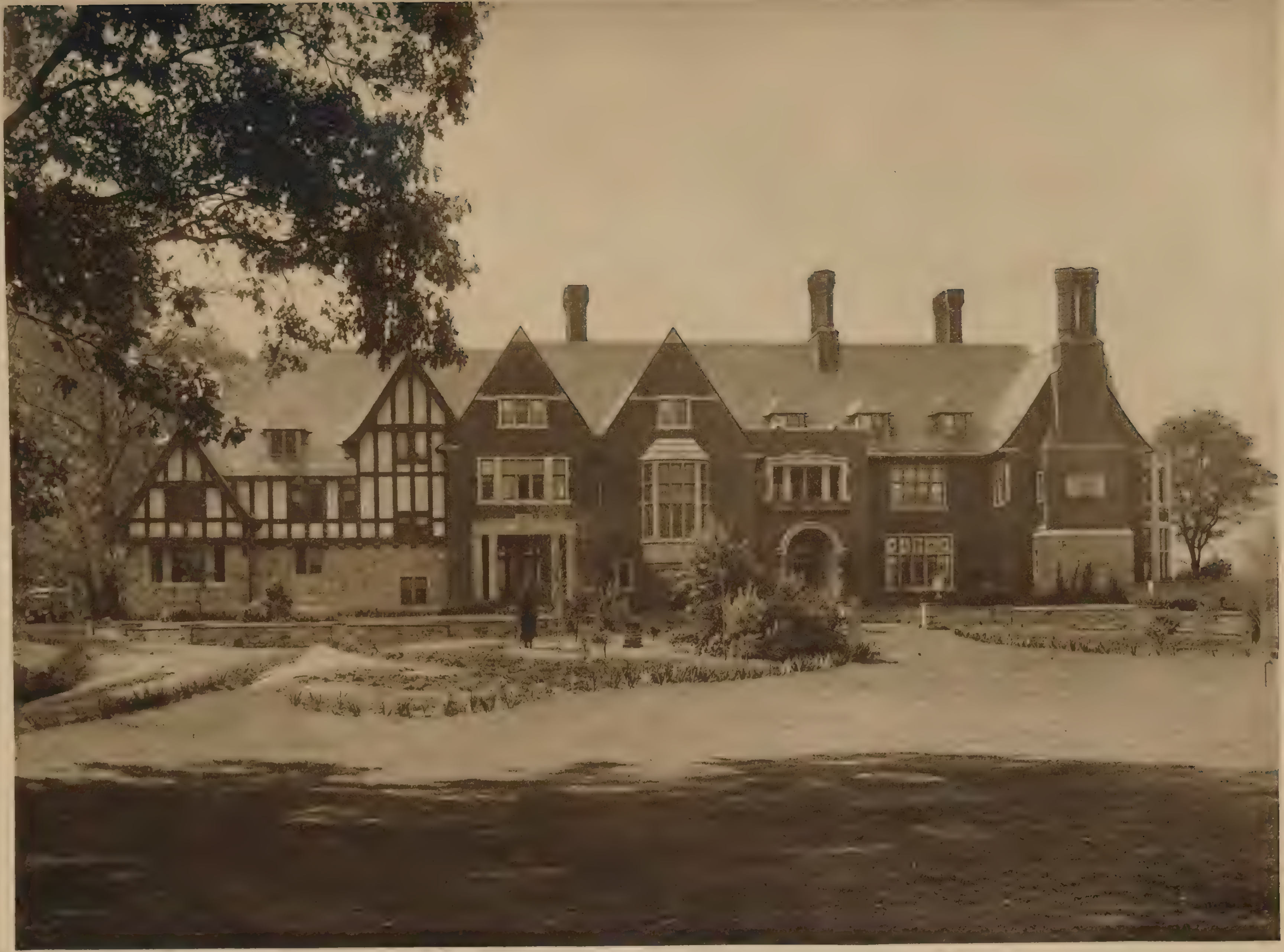


THE LILY-POND IN THE WATER-GARDEN AT BRIDGE HOUSE, WEYBRIDGE, AS SEEN FROM THE GARDEN HOUSE.

By Mr. Harold Peto.

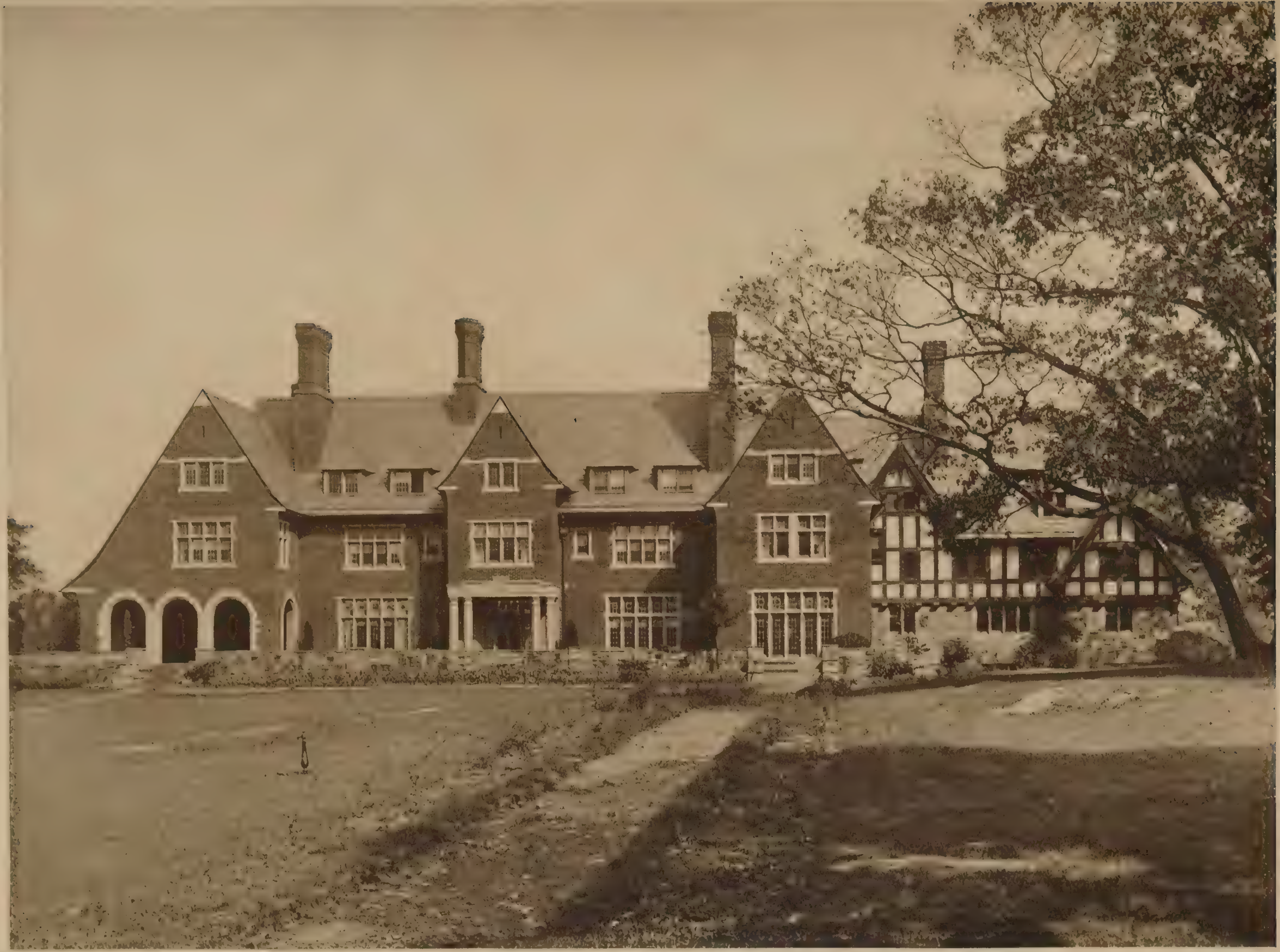


CLASSICAL GATEWAY AND PILLARED SCREEN AT EASTON NESTON, NORTHAMPTONSHIRE. EIGHTEENTH CENTURY.



RESIDENCE, W. V. LAWRENCE, LAWRENCE PARK, BRONXVILLE, N. Y.

Bates & How, Architects.



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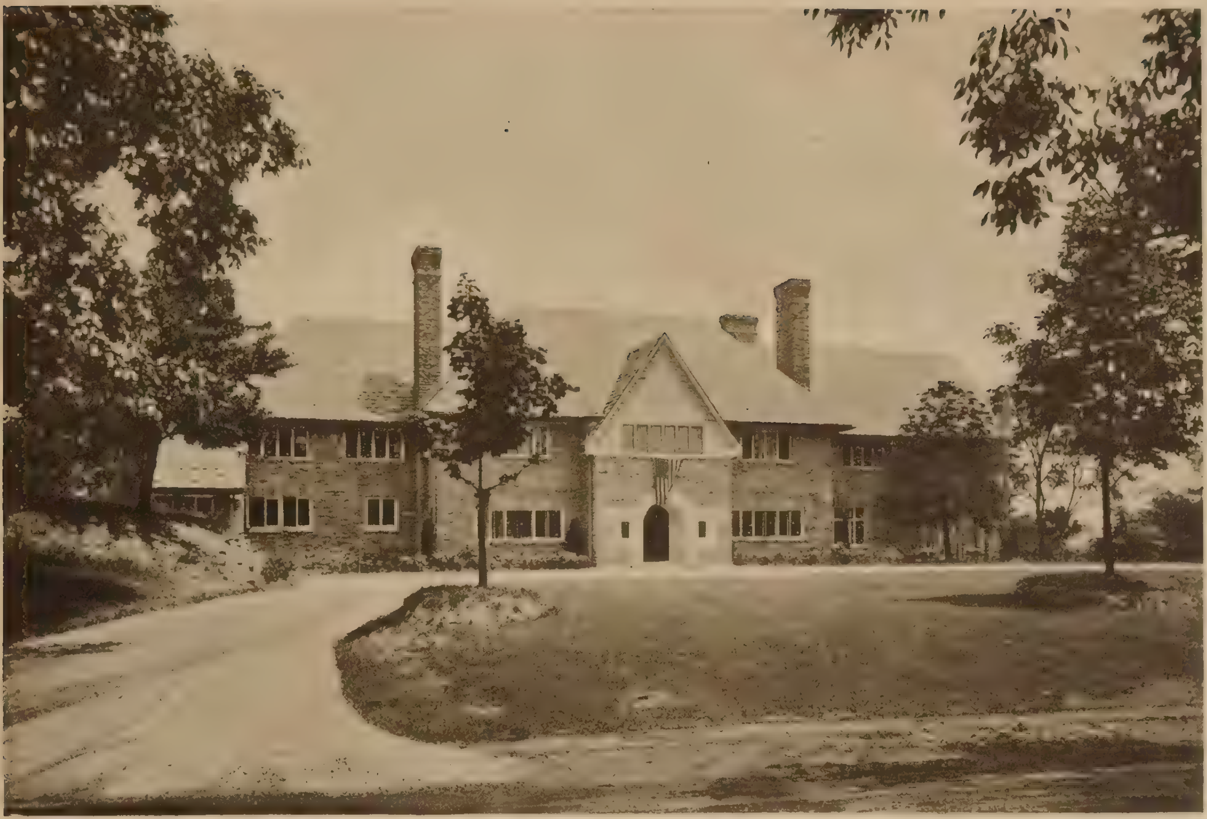
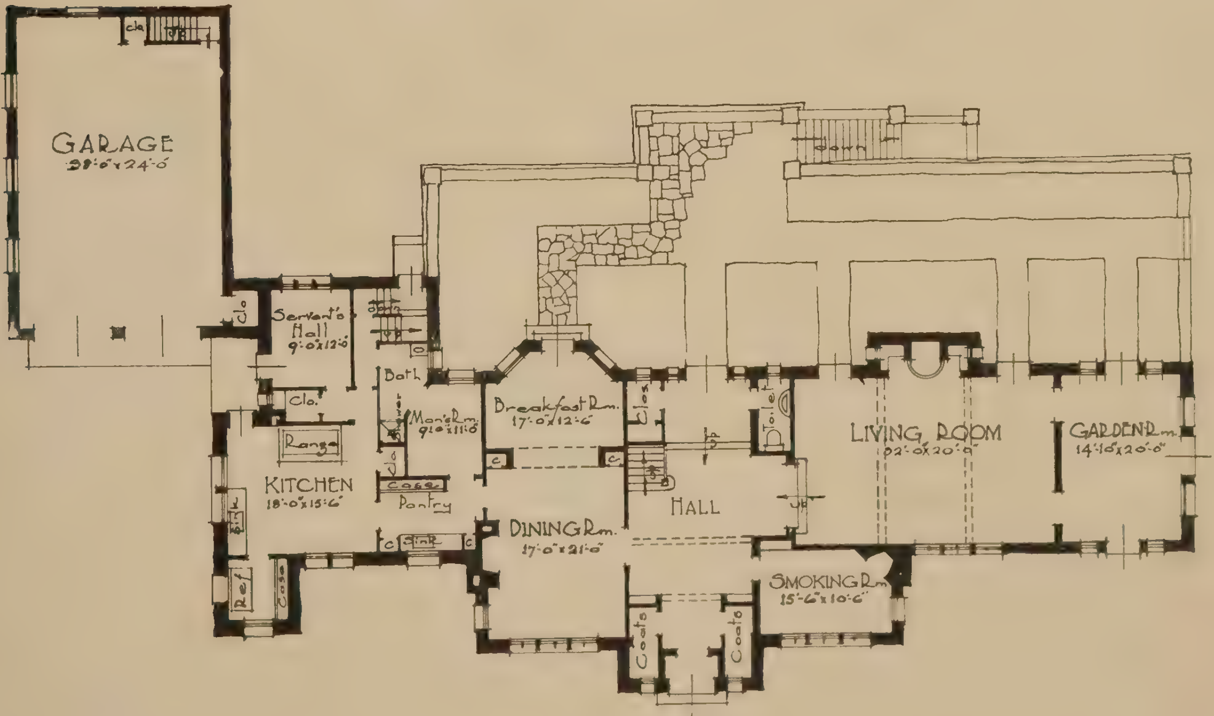
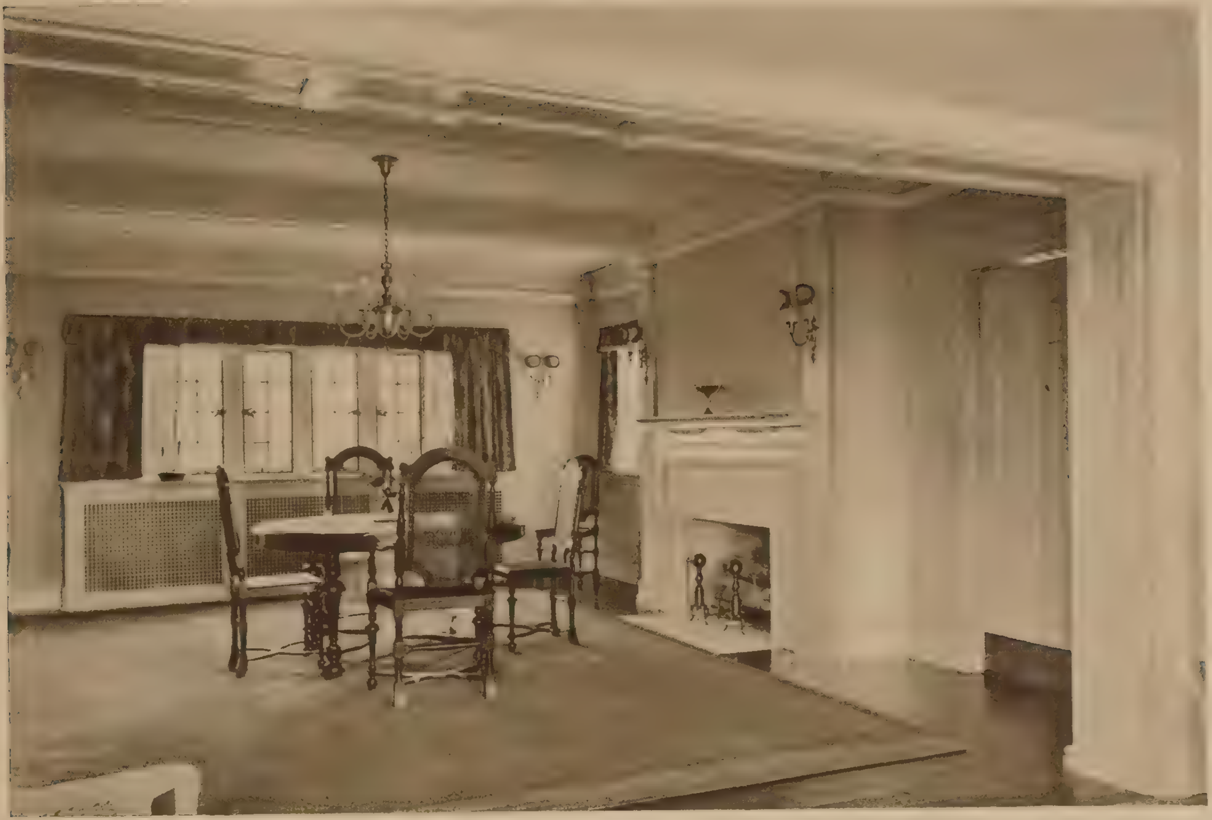


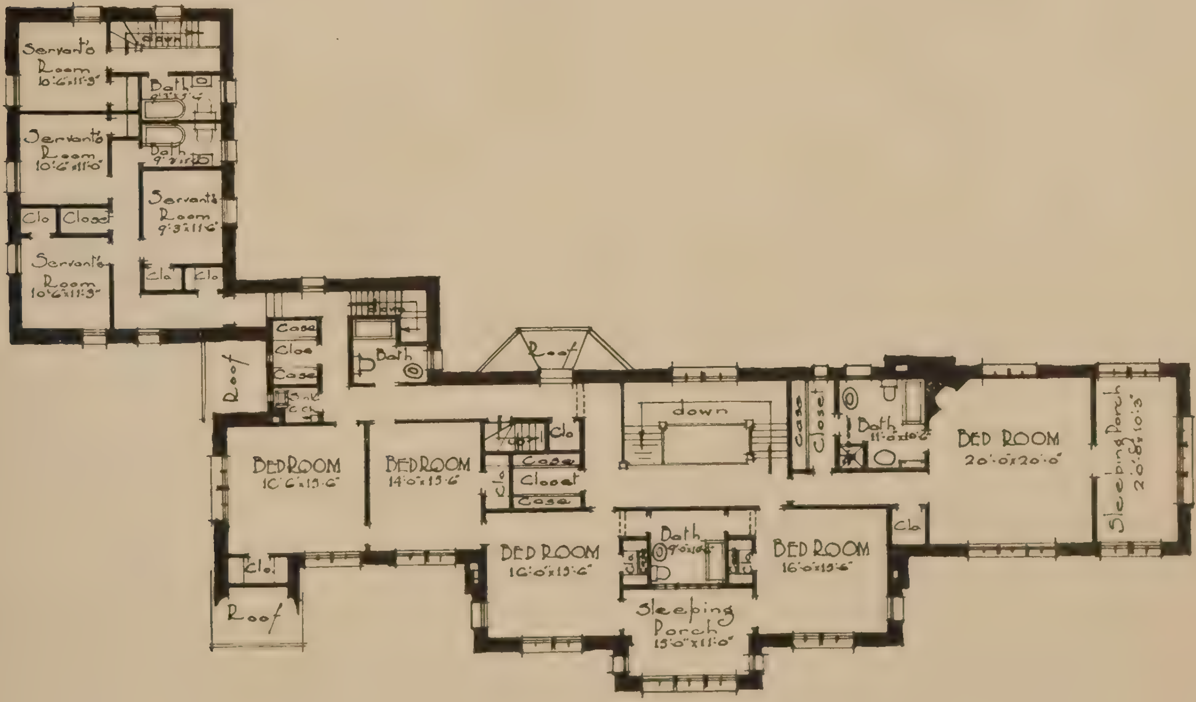


FIRST FLOOR PLAN

HOUSE AND PLANS, SAMUEL F. POGUE, CINCINNATI, OHIO. G. C. Burroughs, Architect.



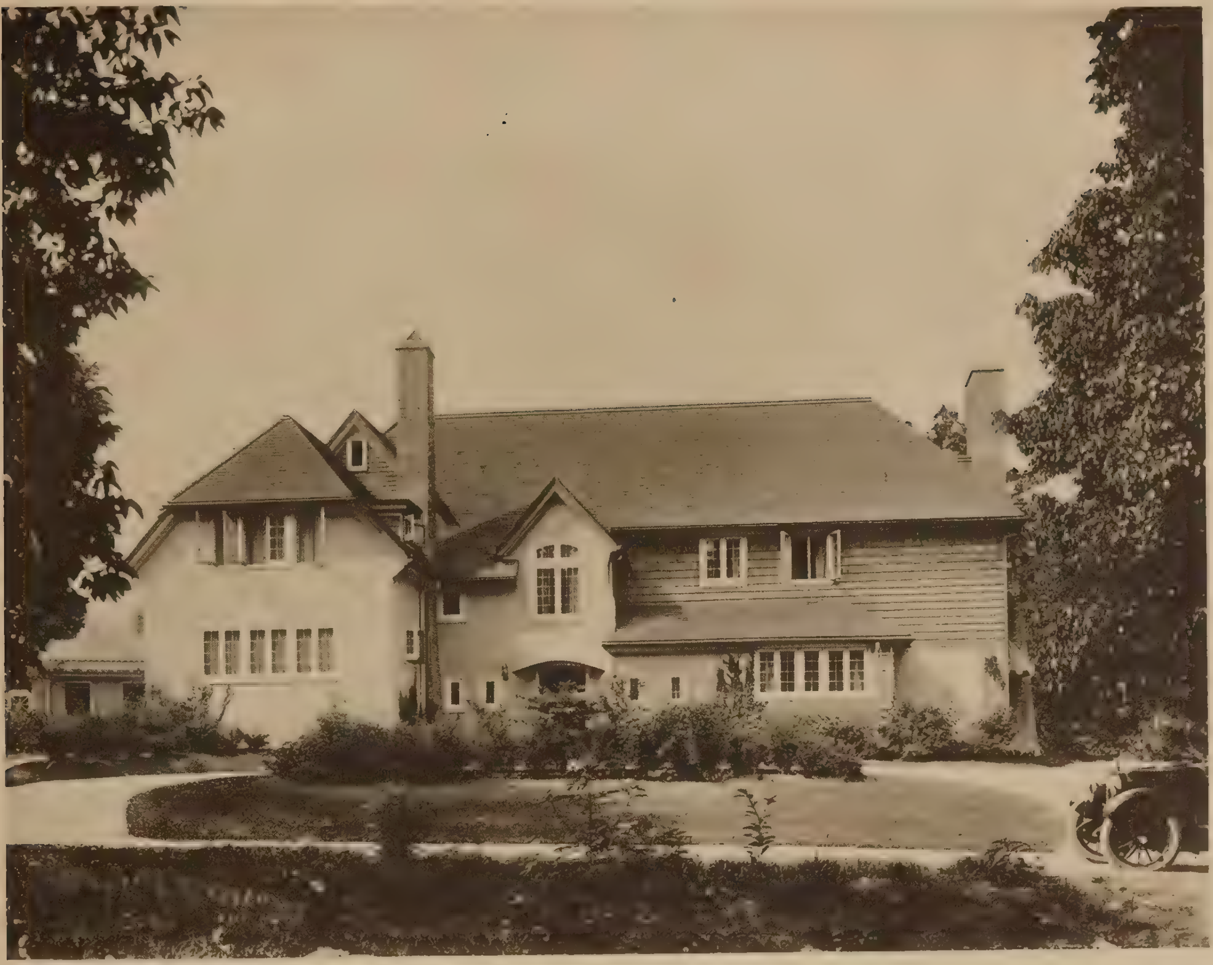
DINING-ROOM.

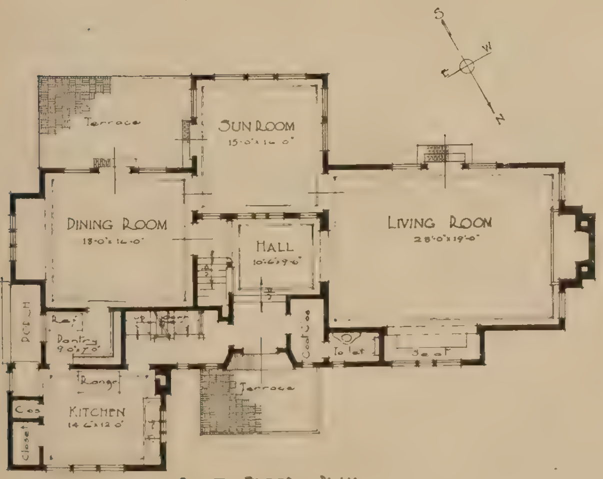


SECOND FLOOR PLAN

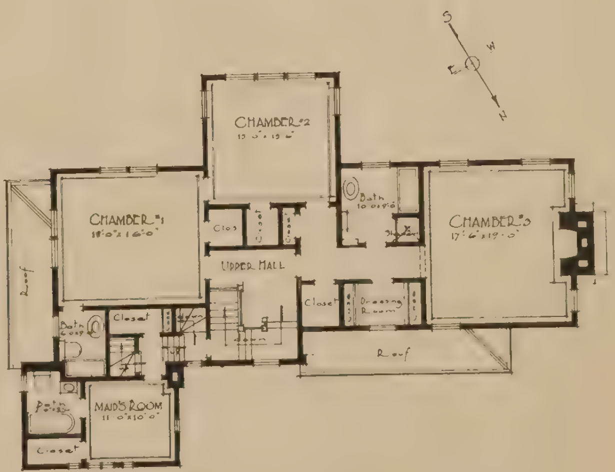
RESIDENCE, SAMUEL F. POGUE, CINCINNATI, OHIO.

G. C. Burroughs, Architect.





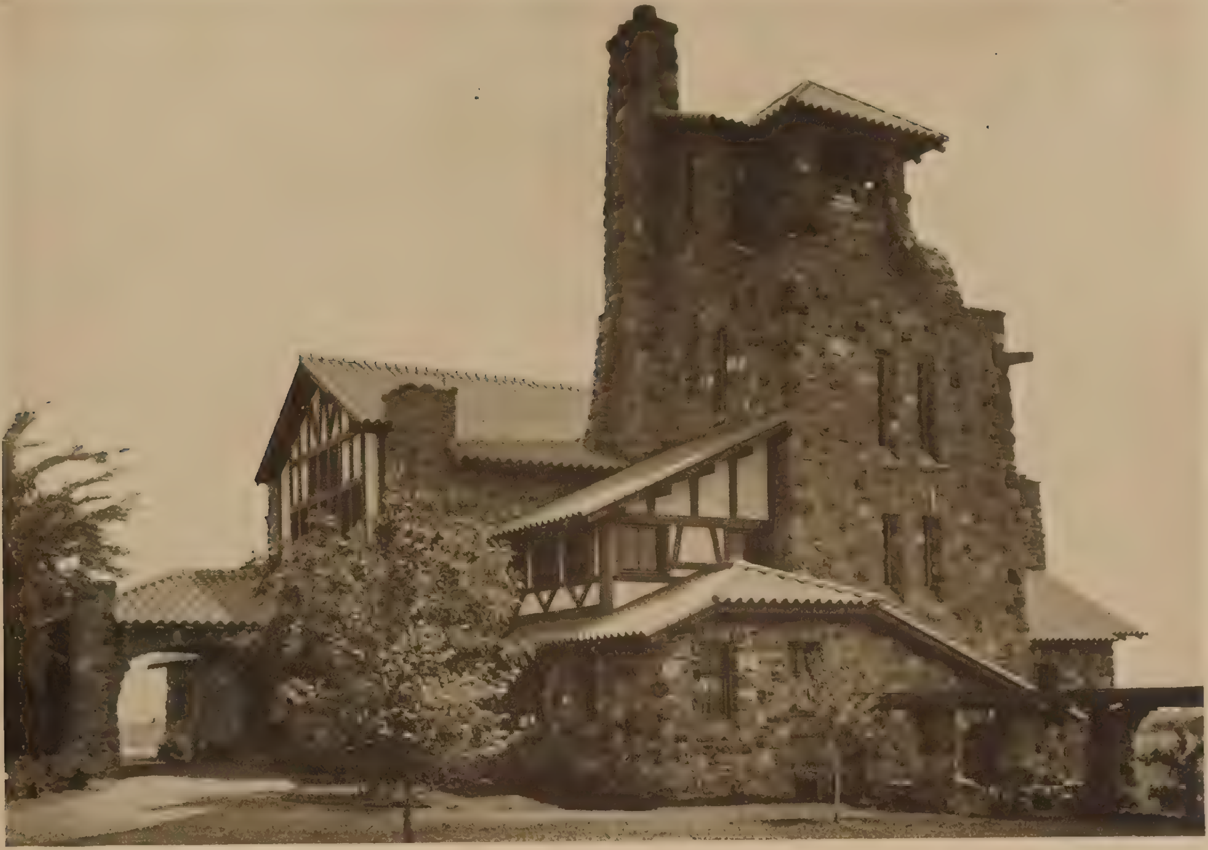
FIRST FLOOR PLAN

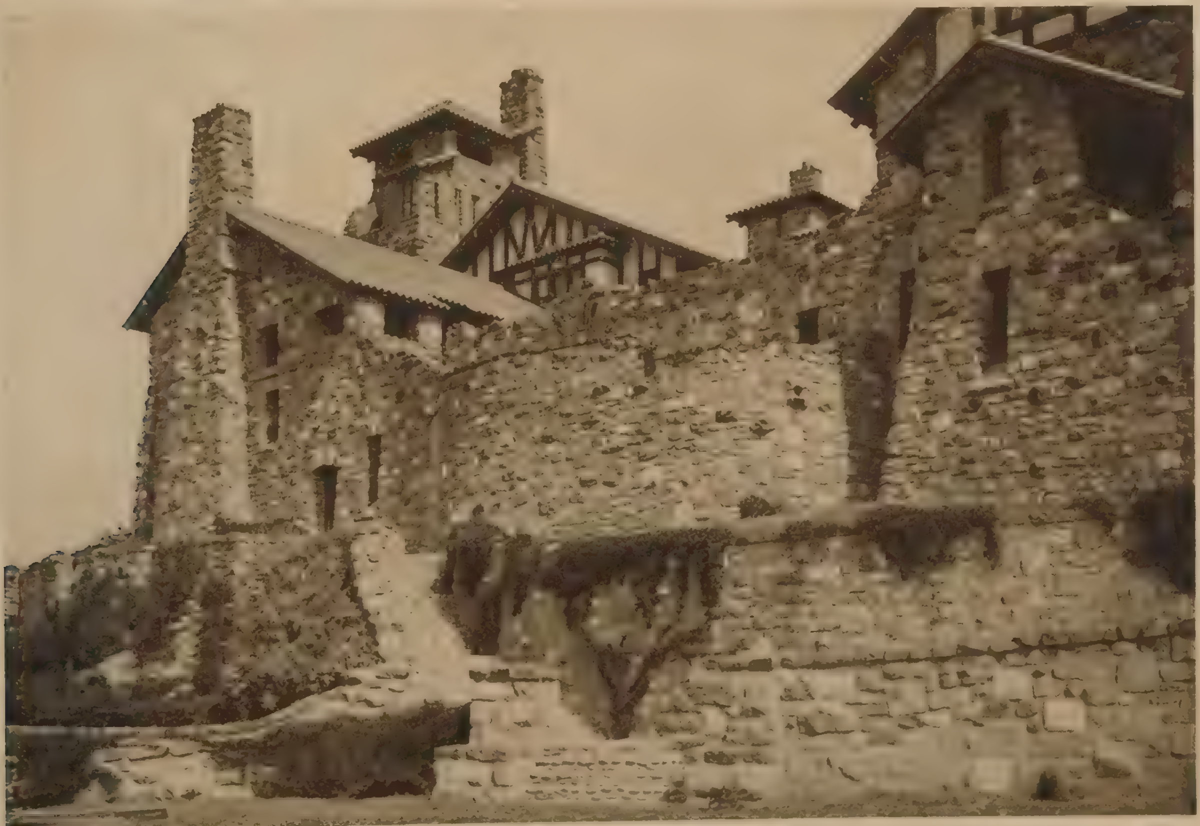


SECOND FLOOR PLAN

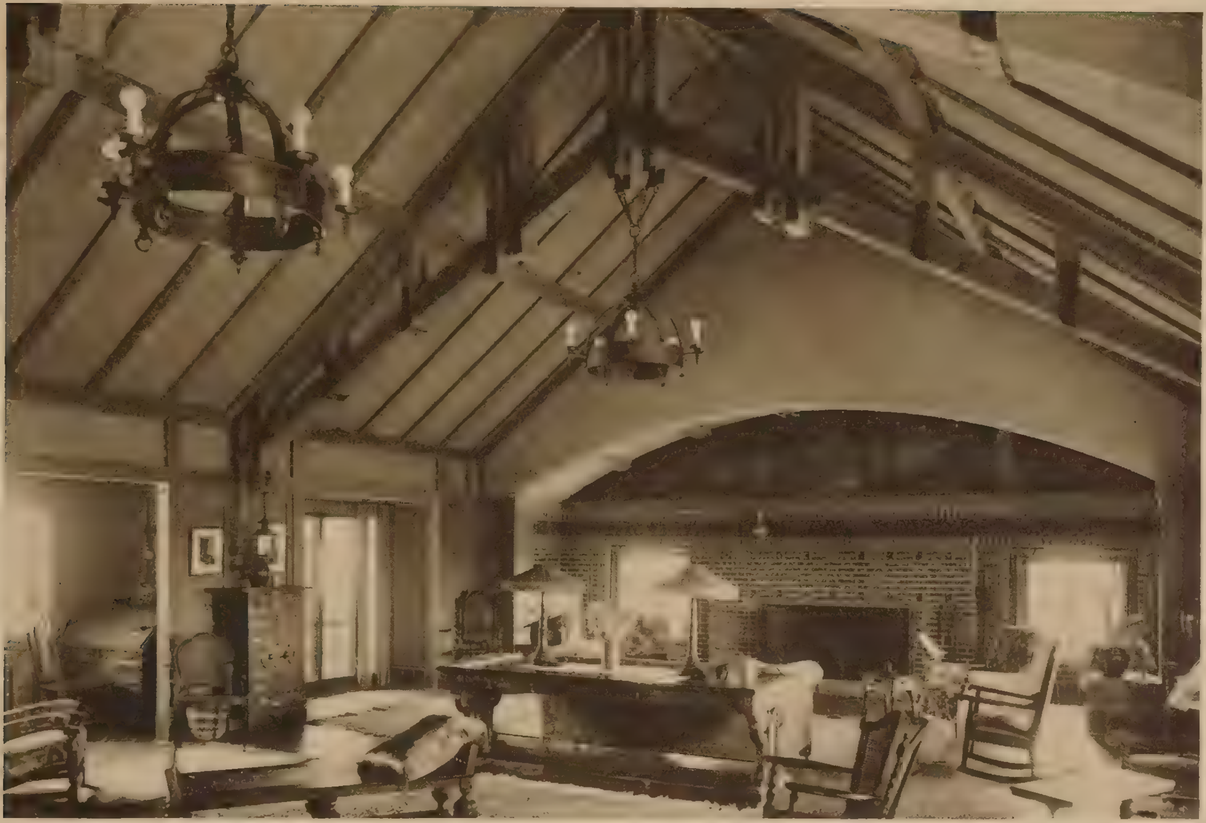
HOUSE AND PLANS, DR. FREDERICK W. LAMB, CINCINNATI, OHIO.

G. C. Burroughs, Architect.

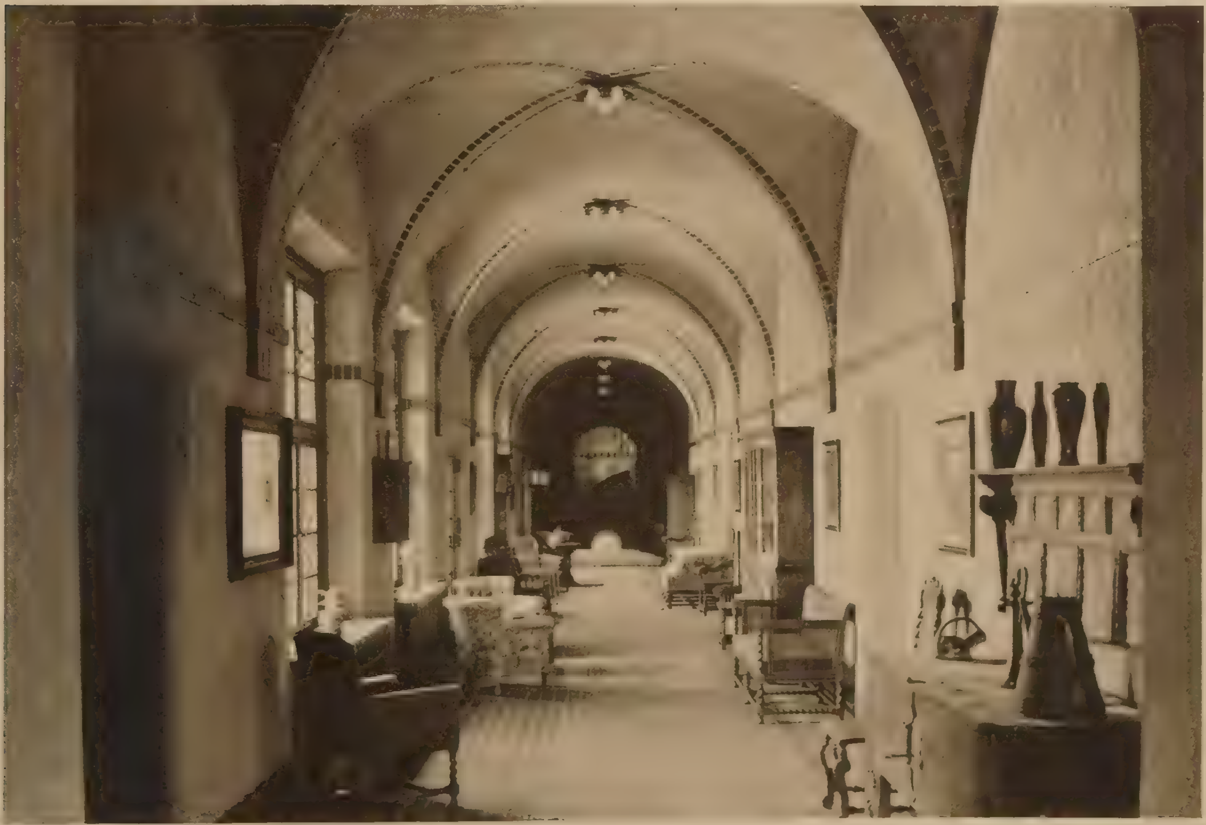




RANCH-HOUSE, NORTH YAKIMA, WASHINGTON. William M. Kenyon, Maurice F. Maine, Architects.

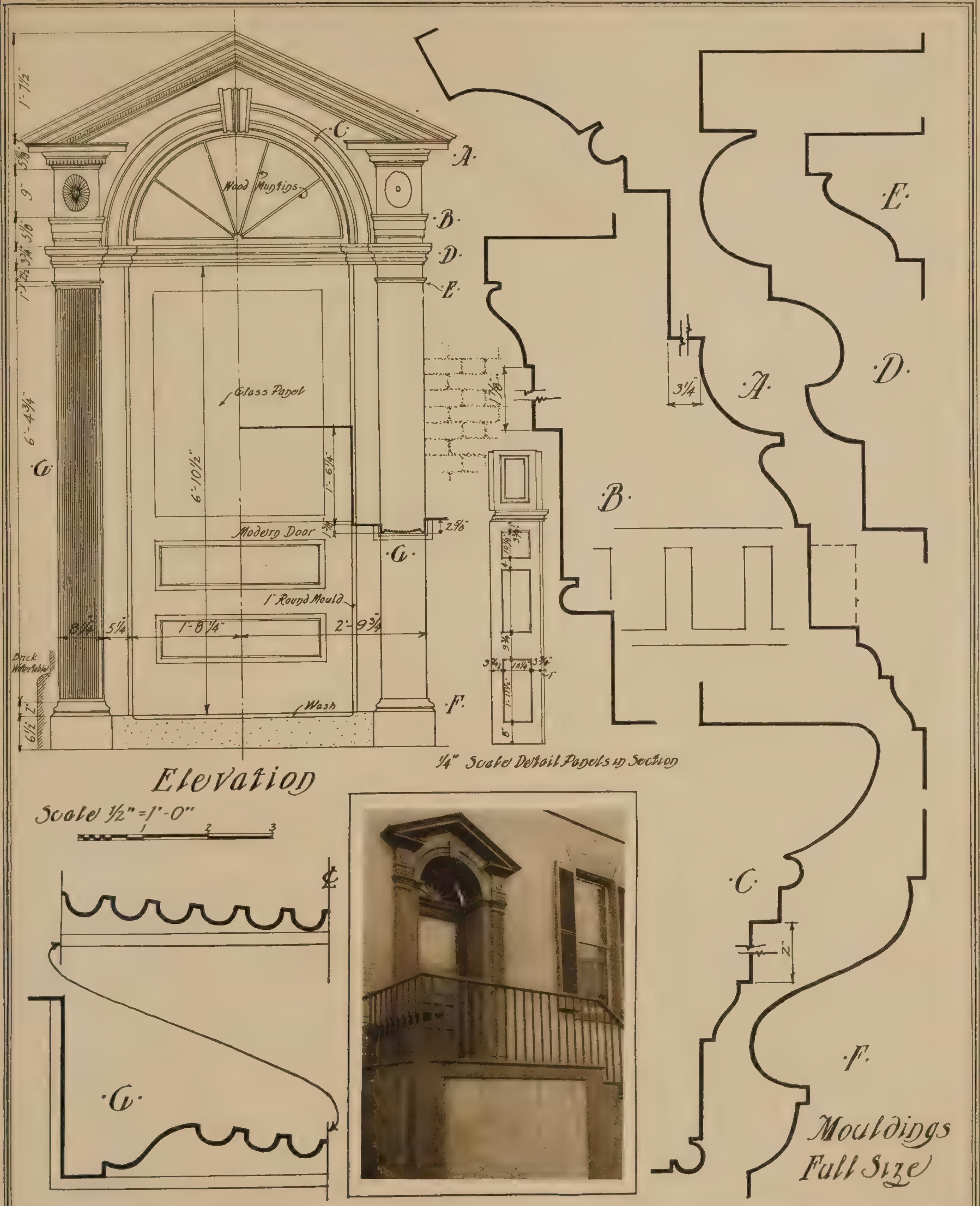


LIVING-ROOM.



LONG CORRIDOR LOOKING TOWARD TOWER. William M. Kenyon, Maurice F. Maine, Architects.

RANCH-HOUSE, NORTH YAKIMA, WASHINGTON.



Early Architecture
of
Virginia

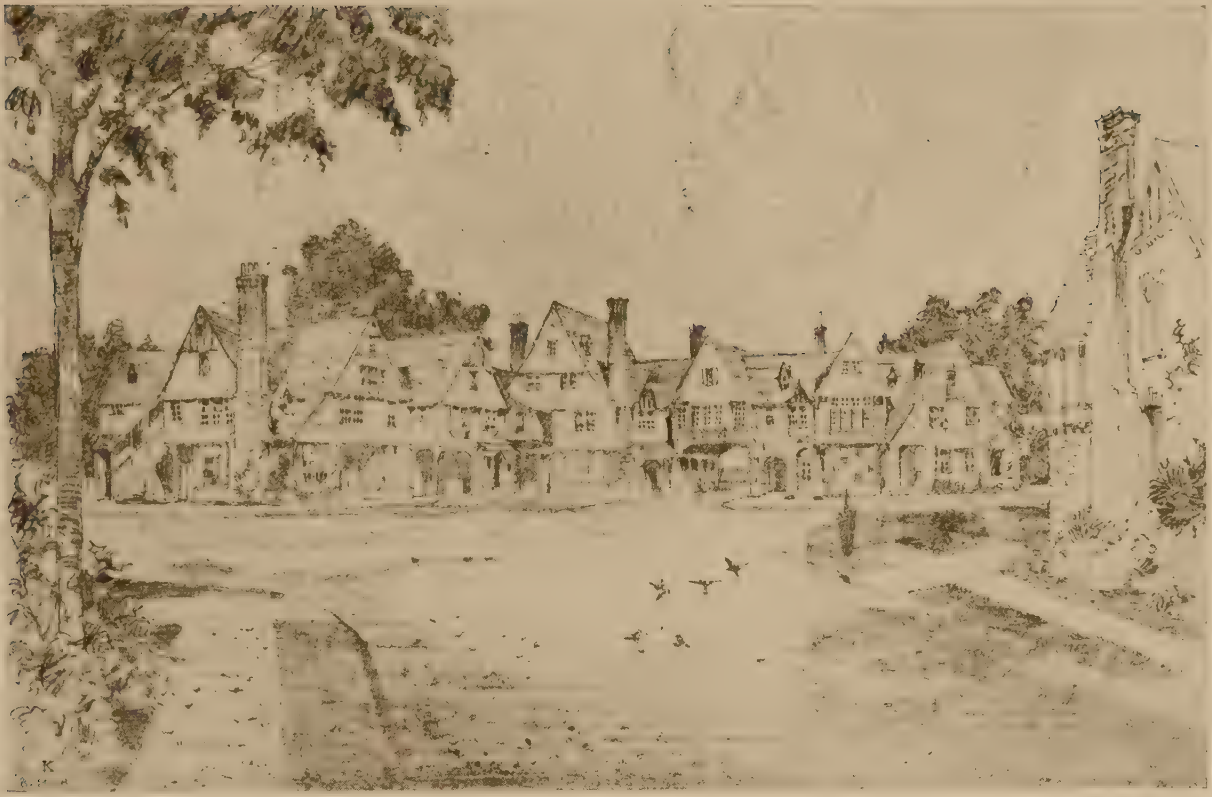
Doorway ~ Taylor House

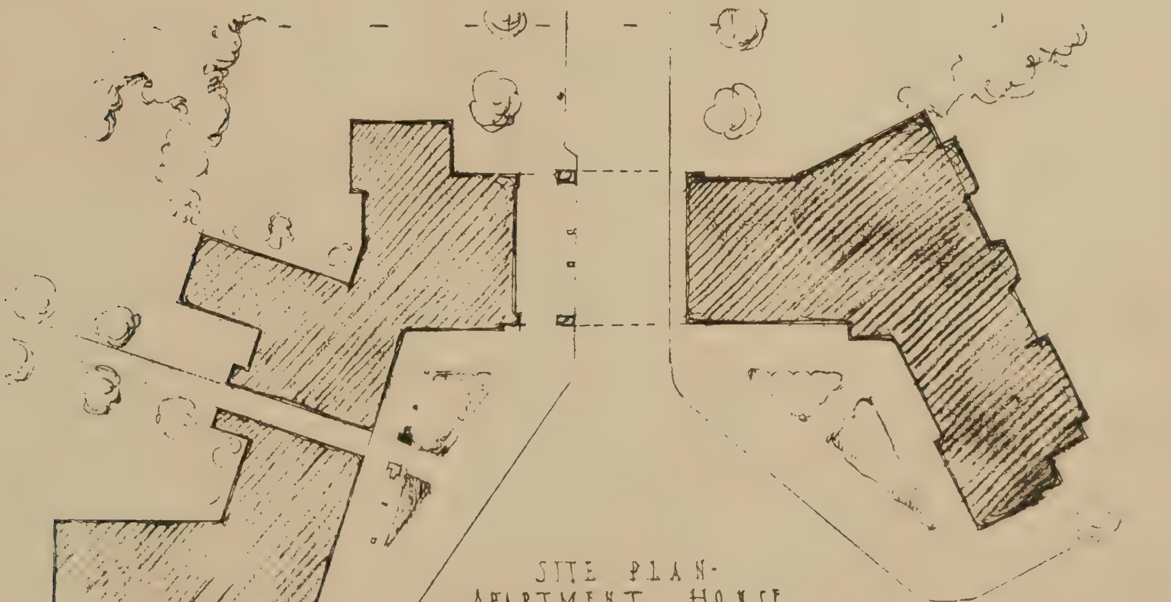
Alexandria, Va

Date About 1820

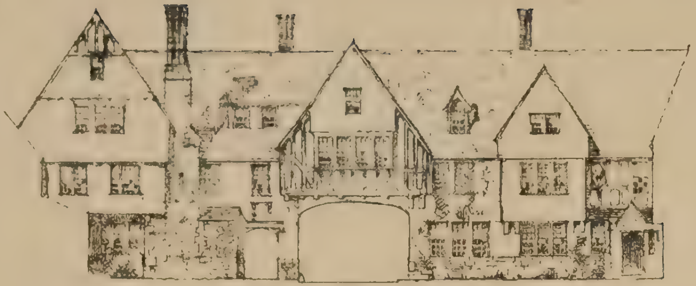
Corner Duke & St Asaphs Sts.

Measured & Drawn By
J.L. Keister
O.J. Munson
J.A. Weber

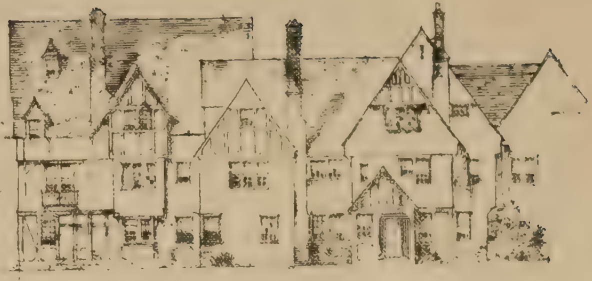




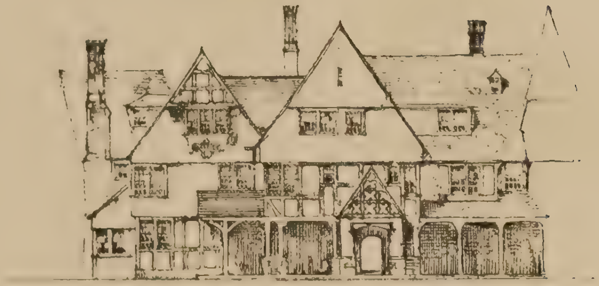
HOUSING DEVELOPMENT FOR CONNECTICUT MILLS, DANIELSON, CONN. Alfred C. Bossom, Architect.



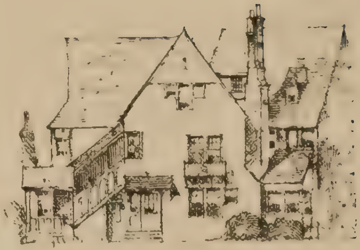
·MAIN·BUILDING·, FRONT·



LEFT WING REAR

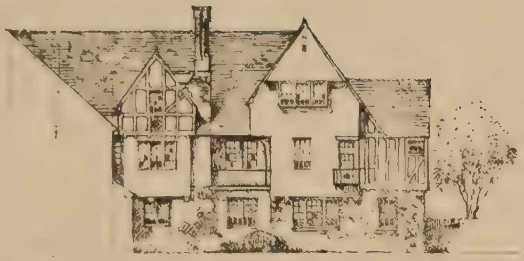


LEFT WING ; FRONT



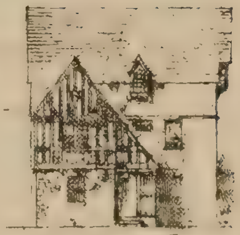
LEFT WING . SIDE.

STUDIES OF APARTMENT HOUSE
FOR THE
CONNECTICUT MILLS CO
DANIELSON CONN.



RIGHT WING , FRONT·

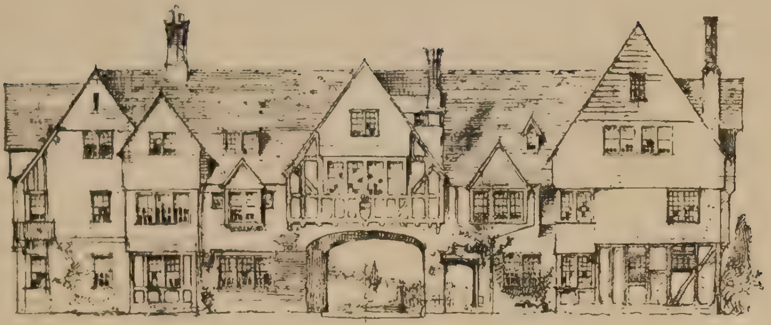
STUDIES·OF APARTMENT HOUSE
·FOR THE
CONNECTICUT·MILLS·CO.
DANIELSON [illegible] CONN.



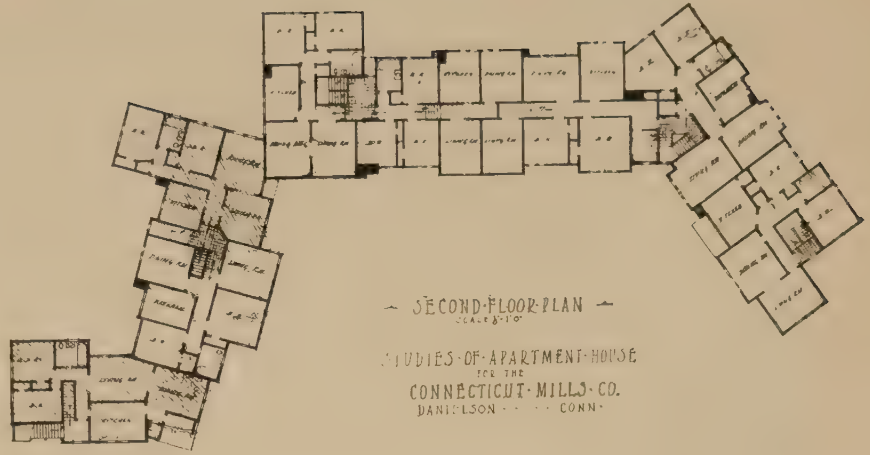
RIGHT WING , SIDE·

HOUSING DEVELOPMENT FOR CONNECTICUT MILLS, DANIELSON, CONN.

Alfred C. Bossom, Architect.

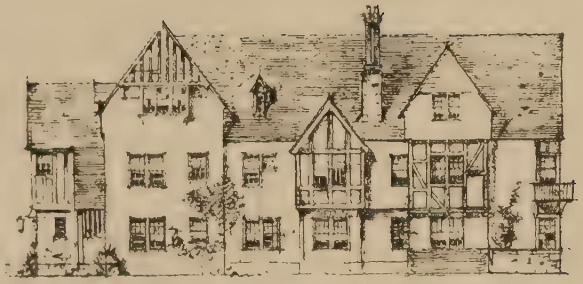


MAIN BUILDING, REAR



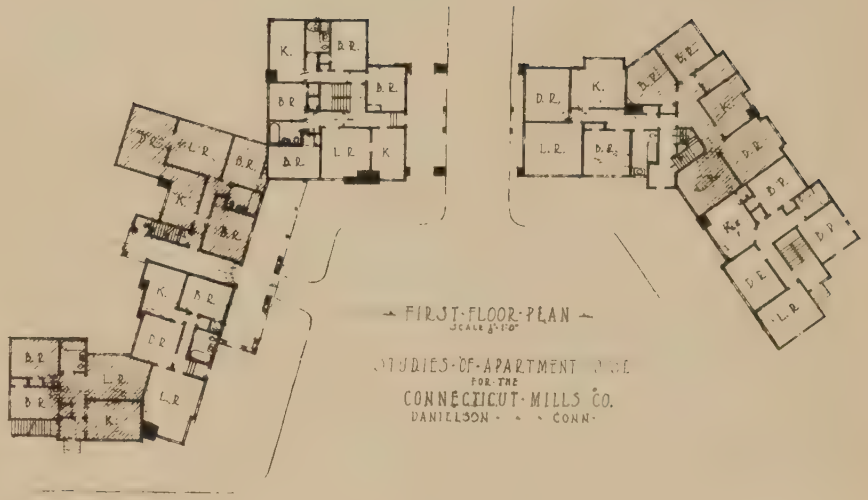
— SECOND·FLOOR·PLAN —
SCALE ⅛"-1'0"

STUDIES·OF·APARTMENT·HOUSE
FOR THE
CONNECTICUT·MILLS·CO.
DANIELSON · · · · CONN·



RIGHT WING REAR·

STUDIES·OF·APARTMENT·HOUSE
FOR THE
CONNECTICUT·MILLS·CO.
DANIELSON · · · · CONN

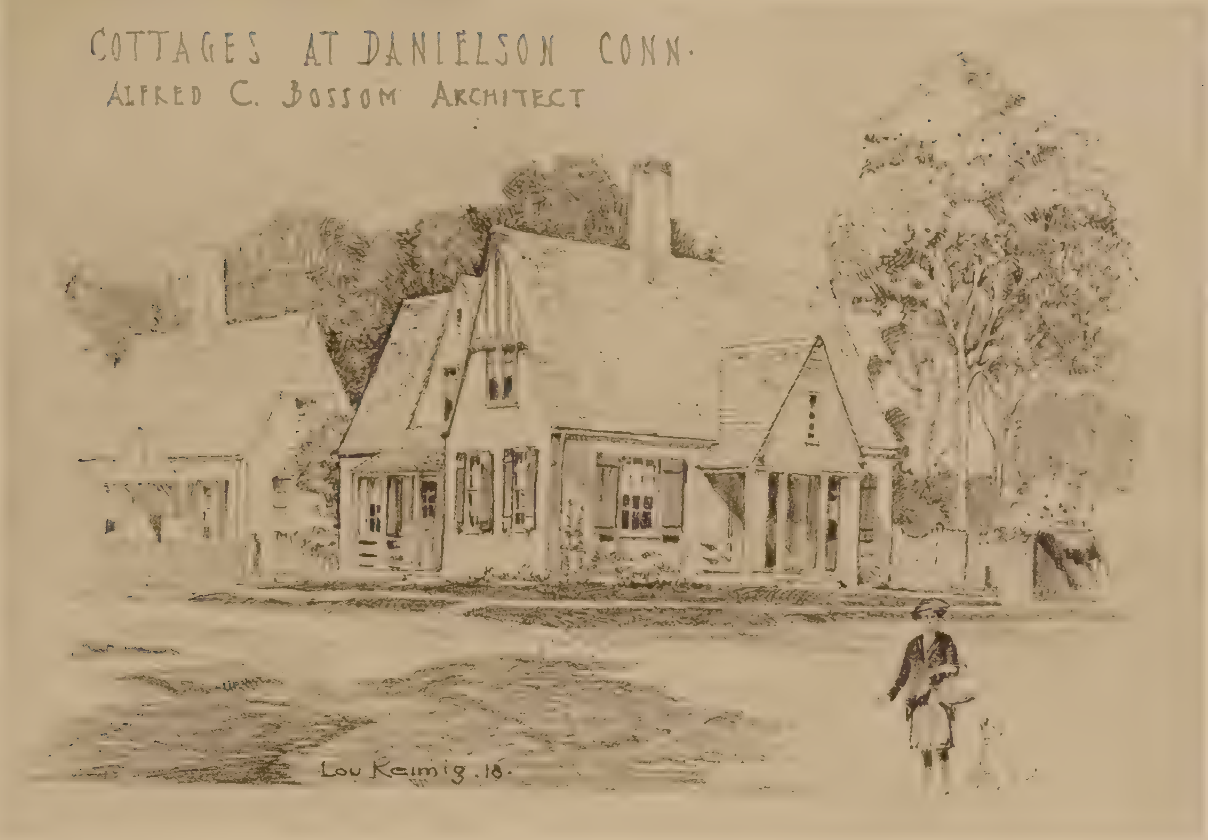


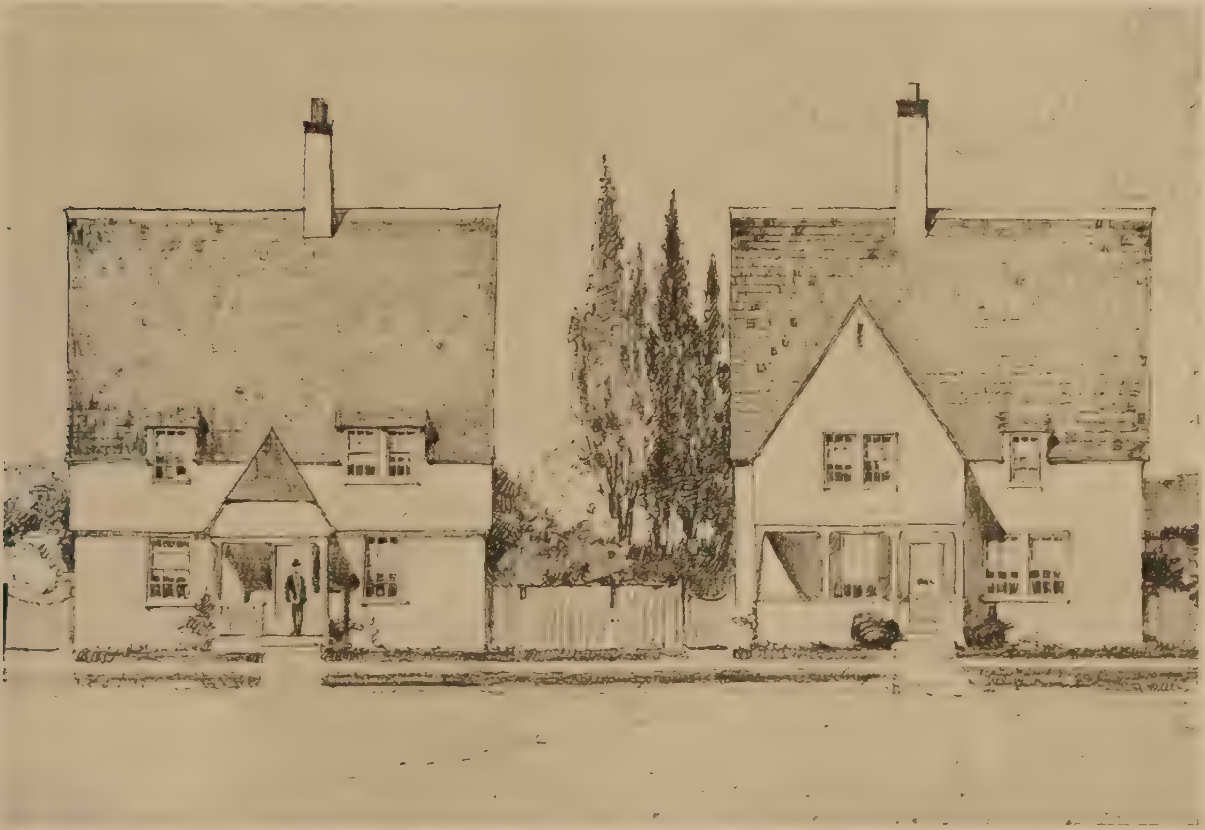
— FIRST·FLOOR·PLAN —
SCALE ⅛"-1'0"

STUDIES·OF·APARTMENT·HOUSE
FOR THE
CONNECTICUT·MILLS·CO.
DANIELSON · · · · CONN·

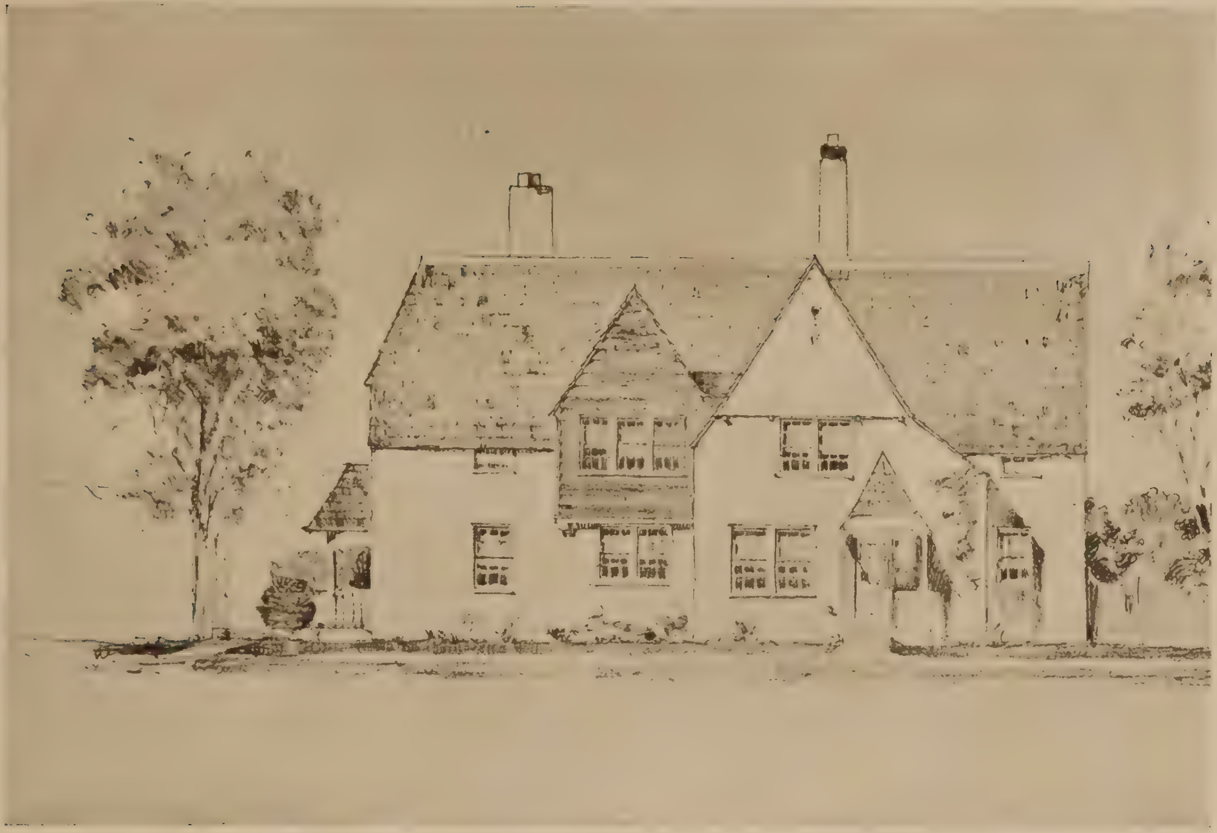
HOUSING DEVELOPMENT FOR CONNECTICUT MILLS, DANIELSON, CONN.

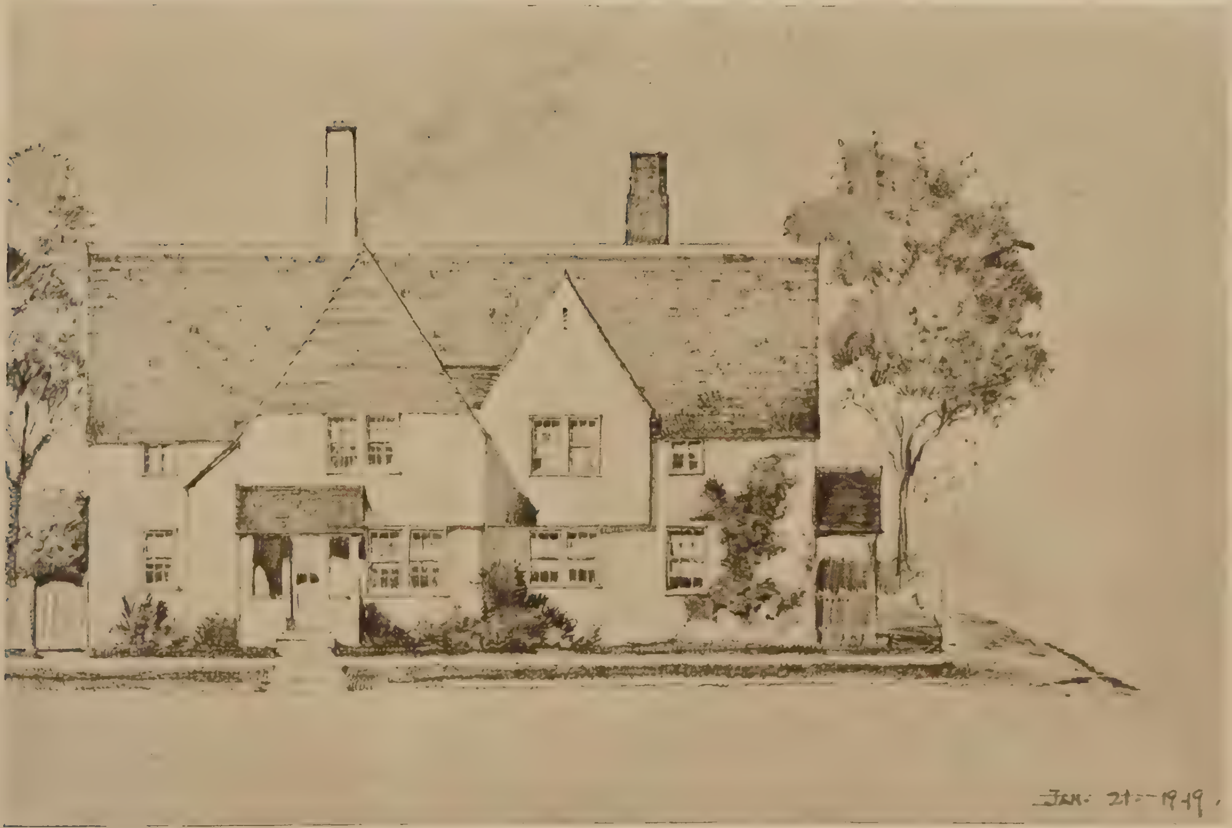
Alfred C. Bossom, Architect.





COTTAGES, HOUSING DEVELOPMENT FOR CONNECTICUT MILLS, DANIELSON, CONN. Alfred C. Bossom, Architect.





JAN. 21st–1919.

COTTAGES, HOUSING DEVELOPMENT FOR CONNECTICUT MILLS, DANIELSON, CONN. Alfred C. Bossom, Architect.

Danielson, a Unique Housing Development

For the Connecticut Mills at Danielson, Conn.

By Alfred C. Bossom, Architect

THIS is a unique effort to carry out housing welfare work with the greatest benefit to the greatest number.

Cottage.

The intention fructified in the mind of the prime mover, Mr. R. J. Caldwell, who possesses one of the largest financial interests in the Connecticut Mills, for whom the development is being made, and for some years past very considerable work has been undertaken in which Mrs. R. J. Caldwell has taken the deepest practical active interest, and as a result of this certain facts have been evolved:

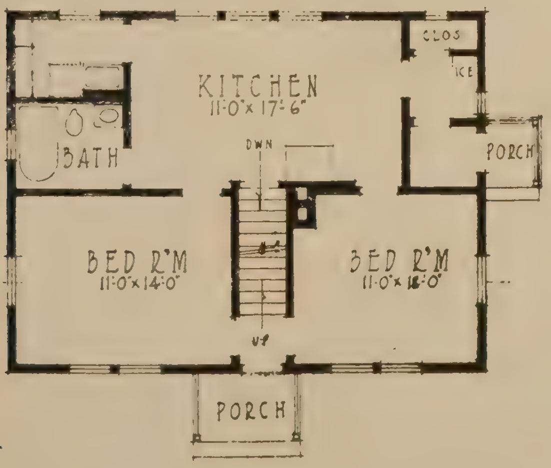
1. Small rooms in that locality are undesirable, about 11x14 feet being the minimum.
2. Five-room houses are smallest size desirable, and houses of six rooms and a usable attic are the most preferred.
3. There must be a cellar entrance from both inside and outside the houses.
4. And a washing pantry with sink and trays is the solution of the kitchen-dining-room combination.
5. All plumbing should be on the ground floor.

In this development typical plans have been worked out, and these have been submitted to all the officials in charge of the mill, and modified and changed until unanimously approved by all interested parties.

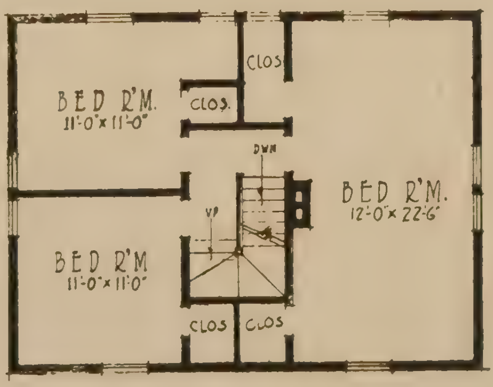
The exteriors of the houses here illustrated are all different, and the endeavor is being made to introduce interest and personality into each separate house. Stucco with slate roofs and a little brick or stone is the material employed in each of the smaller houses. There being a great need for stores on the property, a village centre of two and three story multi-family houses has been decided upon. The same principle has again been followed here, distinct personality and individuality to each apartment, sleeping-porches and private entrance are the rule, all with fire-resisting exteriors.

The many-family houses generally have not been found as popular as the individual or two or three family houses, but due to the greatly reduced cost of housing a family by this means a certain number of people are being provided for in the multi-family houses.

By following these lines definite estimates (exclusive of sewer, sidewalk, and road



FIRST · FLOOR · PLAN



SECOND · FLOOR · PLAN
TYPE - A

improvements) for contract for the six-room houses with attic are approximately three thousand dollars; two-family houses, six rooms and attic, twenty-eight hundred dollars; and average five rooms in multi-family house, twenty-two hundred dollars. These are present-day prices, February, 1919, and it is felt certain these will soon be materially improved upon—and yet provide the same or better accommodation.

The intention has been not to get more than 8 per cent gross return upon the investment, but this may vary slightly in certain cases as the rents of the houses belonging to the mills are fixed in conjunction with those of property owners in immediate vicinity to prevent tenants moving from one house to the other for the sake of a few cents a week difference in rent.

By experience the mill manager approximates that each replacement of an employee that takes place costs the mill one hundred dollars, and the annual replacement is approximately 20 per cent. With over five hundred hands employed in this mill, it is easy to see the overhead expense of replacements, and it is calculated, for instance, that if two replacements can be prevented, this equals the interest upon a three-thousand-dollar house.

Thus, if it is proved that the labor turnover is materially reduced, a more or less fixed relation can be established between the number of houses advantageously needed to the labor turnover.

Again, the general plan is not necessarily to sell the houses to the operatives. It is felt at this stage more desirable to keep greater control over the accommodation provided than would be possible if the houses were sold.

The writer (the architect in charge) feels very strongly on this point of selling or leasing. Surely it is totally unjust for the owner, with the greater amount of capital and facilities for rerenting the houses built, to expect a workman to guarantee to pay for a house in a certain location unless he—the employer—equally and at the same time guarantees that workman continuous employment in the location in question.

At Danielson experience may dictate a change of policy, but now this is the plan adopted. A welfare worker, with her own house, lives in the midst of the development, as does also the mill superintendent.

The complete scheme includes a nursery, already under construction, a complete, thorough, small hospital, with medical attendants, a gymnasium and movie auditorium for both sexes combined, and a local school may be added later, although over seventy children daily go to the town school, just outside the development limits.

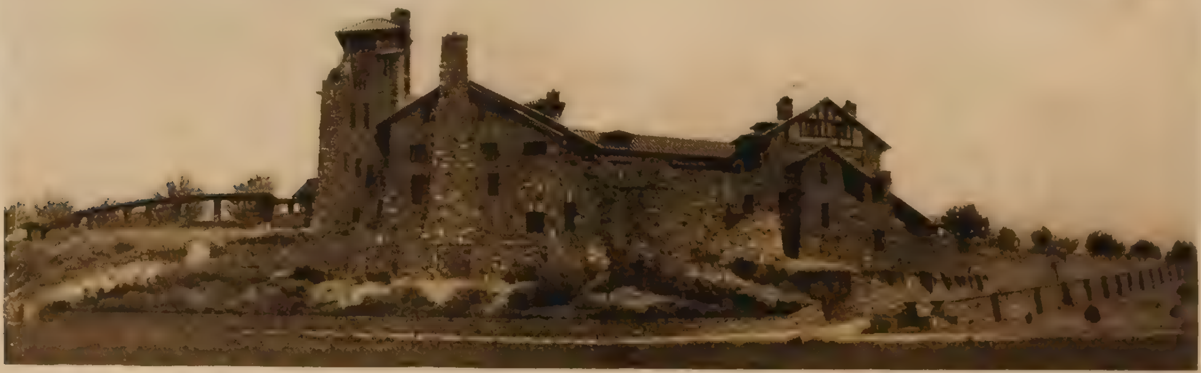
Taken altogether, it is an example of carrying out a housing problem exactly as it should, theoretically, be operated, with the advantage of the architect having the heartiest sympathetic co-operation of both Mr. R. J. Caldwell, his wife, and all the mill people generally.

The North Yakima Ranch-House

By William M. Kenyon and Maurice F. Maine, Architects

THIS house is located in the beautiful Yakima Valley, noted for its apples, pears, and other fruits. The estate in which the house stands consists of 1,000 acres, devoted mostly to apple-raising. The house stands on a hillside, the lower grade being about 40 feet below the upper grade. All around are hills or low mountains far enough away to produce that purplish-blue effect that the artist loves to paint. From the court, on the first-floor level, one looks across a great expanse of country, picturesque in the extreme, but quietly showing evidences of industry which satisfy and please the eye. From the tower a much more extensive view is obtained, although from the court Mount Hood and Mount Adams are plainly visible.

The exterior of the house is built of three kinds of stone, all obtained from the near-by mountains. One of these is a lava rock, gray in color, running into rusty white. Another is a moss rock quite irregular in shape and of various brown shades. The third is a black trap rock with a quantity of rusty gold mixture. These stones are laid up at random, with very little shaping, in large, light-colored joints. The situation calls for bold treatment, rugged detail, and, in general, everything on a large scale.

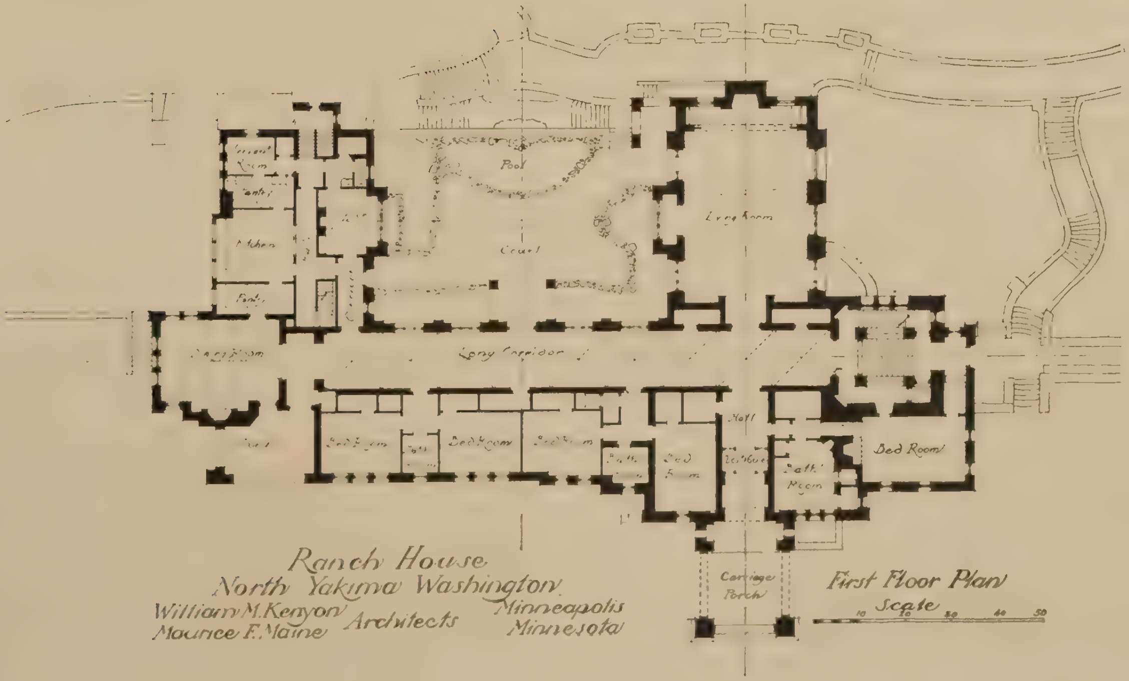


No attempt was made to follow any specific style of architecture, the aim being to make the house fit the site and appear as if it belonged there. On the lower level, a natural creek circles about and is spanned by two stone bridges, one of which connects with the lower stone wall.

The exterior walls vary in thickness from 2 to 3 feet, although the lower walls of the tower are 5 feet thick. The heavy timbers used on the exterior are hand-hewn Washington fir from the Cascade Mountains not far away.

The interior of the tower is of stone like the exterior, with stone steps ascending around a central open shaft. These steps lead up to a small inside lookout room just below the top or open lookout. From this room level the steps leading to the top are outside.

In the first story the long corridor connects the tower with the dining-room 125 feet away. This corridor, the living-room, and office enclose the court on three sides. The rooms, except bedrooms and kitchen department, are finished in rough resawed white oak with very light-brown stain and no other finish. In the second story there is a large library connecting with the tower and also having an opening with balcony into top part of the living-room. The balance of the second story is devoted to sleeping and bath rooms. In the basement the room directly under the living-room is a swimming-pool with access from the tower. In the other end of this story apartments are provided for the caretaker and family. There is a sub-basement under the caretaker's rooms, the floor level in this location being 6 inches above the level of the service court.



Some Reflections of a Draughtsman

By Talbot Faulkner Hamlin

I

ON ARCHITECTURAL EDUCATION

THE architectural draughtsman has usually been trained in one of three different ways. He may be the graduate of an architectural school, or he may be the graduate of any one of several evening trade-schools, or he may simply have received his education by a long process of absorbing his surroundings during a gradual rise from the status of office-boy to the dignity of T-square, triangle, and shiny instruments. Whichever of the three systems he happens to be a product of, the thoughtful draughtsman, as he grows into maturity, is very likely to submit his education to a close scrutiny; and in the light of his present environment, attempt to appraise it, and, if possible, suggest means of improvement.

The system of office education depends so entirely upon the ideals of the office, and the quality of the office leadership, that it is almost impossible to discuss it in any but personal terms. It may make or ruin the student's career; it may make slaves of routine, or true masters of their own minds, according as the "boss" is interested principally in his profits, or in his professional family. Education cannot be left to a machine, even the small machine of an architectural office. The *teacher*, be he "boss," or head draughtsman, or fellow-worker, determines by his own character and his own enthusiasm the ideals of his pupils. Is it small wonder, then, that a youth doing his best, making, perhaps, hundreds of ignorant mistakes and seeing his laborious efforts received without sympathy and criticised without understanding—or, worse still, not criticised at all—may grow up into a draughtsman who lives by the clock and uses only the least laborious, most routine methods of holding his job?

On the other hand, put that same youth into a small office with a sympathetic "boss" who has time enough to give his pupil a little real personal attention, and you may make not merely a good draughtsman, but even a true artist and creator. It is the teacher who makes the difference. Unfortunately, such offices are rare, and in these bustling industrial times becoming still rarer. More and more job chasing and supervision take the "boss" away and lessen his personal interest in his employees, and in large offices the direction of the younger and less skilled men—the pupils—is left in the hands of men, themselves employees, who often have neither the wisdom nor the sympathy to give the youngsters the training they deserve. If we believe in this system of office-training, we must see to it that it is more carefully supervised. As it is, it seems doomed, save in very exceptional cases, and produces draughtsmen of limited initiative and usefulness.

The pupils of the evening trade-schools are in a slightly better position. Their instruction is at least systematized and supervised. But its level is not distinguished. Alas, with the salaries these schools pay, how could it be? And too often the aim of the courses is more purely utilitarian than it should be. They train the hands, but the imagination they leave cold; and is it not the main object of education to enkindle that into a hot and vital flame? Moreover, the teachers are usually themselves draughtsmen; often, one is tempted to believe, driven to this evening work not so much by the desire to teach as by the insistence of rent bills and grocers' duns. It is rare, indeed, that such a man makes an inspired or inspiring teacher.

It is, therefore, becoming more and more true that the best draughtsmen receive their training from the architectural schools and the *ateliers* of the Society of Beaux Arts Architects. This is itself somewhat of an anomaly. The architectural schools are intended primarily to train architects, not draughtsmen. Their graduates are expected to be draughtsmen, to be sure; but only for a limited period, in order to gain the experience necessary for the opening of their own offices. The future will prove this expectation, I doubt not, a great fallacy, for who would be brave enough in these days of rush and efficiency to foretell a new era of one or two man offices? The signs point the other way, and the draughtsman must look forward at most to eventual participation in a large firm as his reward and not to the absolute headship of his own office. But that is another question.

The product of this anomalous condition, the young graduate architect-draughtsman, usually finds much food for thought in his education; finds much to blame and much to praise. At first, the shock of the contrast between the free *camaraderie* and enthusiasm of his school and the routine nine-to-five "pencil pushing" that usually awaits him at the start of his office career staggers him. His sense of proportion gets deranged. He feels that he has not been, or is not, treated fairly, has not been warned. . . . His knowledge, acquired by hard work for four years—hard work and lots of fun, hard work that is the very antithesis of routine—seems so foreign to his present environment that a lot of it appears almost useless.

A little later, when the bitterness of the contrast has been somewhat mitigated, the draughtsman's real knowledge, like any real knowledge, begins to count. The school graduate begins to see that his cautiously suggested ideas are sometimes accepted. He sees that the artistic primacy in most of the offices is held by school men. If he has kept his eyes and mind open during his course, he must have acquired a working knowledge of architectural bibliography that becomes more and more useful to him and to the office. Above all, he is not afraid to *think*. He is not afraid to attack any problem he is given, for the school has given him at least a foundation on which he can build in doing any sort of problem, be it engineering or design. But more valuable than anything else he is likely to find his training in these things: imagination, taste, and architectural history.

At first the leap from the colossal subject of his thesis, or his last *projet*, to the cottage or barn or doorway he gets to draw up in the office is overwhelming. Later, the subjects of his *projets* slip into the back of his memory, and are finally forgotten; but because of them he has acquired the ability of analyzing any problem into its elements and evaluating them, and working accordingly. And some of the wild coloring of his last *projet* has sunk into his soul, and his imagination uses a bit of its glow even when he is detailing a window muntin.

A real knowledge of past building is not only an intellectual but an emotional stimulus as well. It makes the draughtsman feel at home in his work. It is almost like giving him a great number of noble friends for his comfort and inspiration. Love of, and admiration for, the beautiful monuments of past times emotionalize and vitalize the present task. The draughtsman need never lack vital inspiration if he can be made to see that even the most routine detail of his work is necessary for the construction of some building to-day, which, however humble, attempts the realization of some of the repose and beauty and spiritual content of the great buildings he has studied and learned to love.

There is another result of good teaching of art history that is important. A good teacher of art history cannot fail to impress upon his students how intimately the history of art and the history of the race are connected; how every great change in style is only a symptom of some great change in ways of thinking and living. The history of architecture ought to teach that life and art are one, and that falseness of ideal is mirrored inevitably by a fake architecture. It ought to go far toward removing that destructive view-point of the present day, that sees architecture as something very far off and esoteric and unimportant, instead of the very stuff of our contemporary civilization. It ought, in a word, to open the draughtsman's eyes to the social implications and the social responsibilities of his art.

The architectural graduate, then, after a few years of draughting, realizes the deep gratitude he owes his school for all these things—for the ability to think in terms of his art, for the trained imagination, for the background of inspiration, for the fine fellowship of past greatness. He is grateful, too, though in a less whole-hearted way, for the *atmosphere* of the school. He is less sure of his ground here because he has come to see that a portion at least of the atmosphere of some *ateliers* and schools is forced and not real. For all that is real he has only the deepest gratitude. When a crowd of young people are together for four years in such an intimacy of hard work and enthusiasm, the growth of a real *camaraderie* is inevitable, for the common interest in beauty is one of the strongest possible bonds, and one of the most inspiring. But the draughtsman wonders why, if such an inspiriting atmosphere is inevitable, any additional elements need be forced into it. He has come to realize that New York or Chicago or San Francisco is not Paris, and that Latin moral ideals cannot be grafted overnight onto American youth without some irreparable loss of fine sensitiveness, if nothing worse.

Opinion on other questions of criticism is more divided. This division of opinion is in itself a criticism; it shows, at least, that no one school is flexible enough to furnish every one with what he thinks he most needs. That, however, could hardly be expected. In general, there are a few criticisms that seem applicable in nearly all cases.

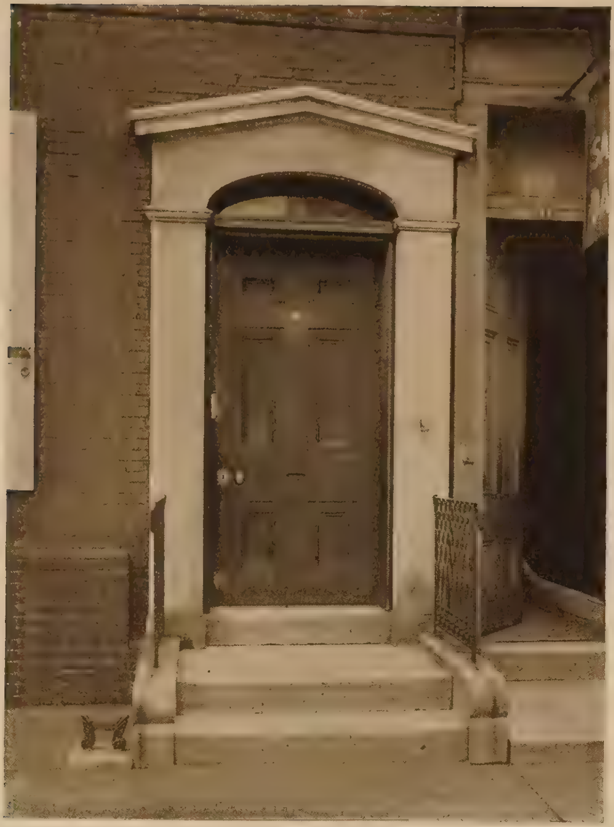
One of the most important of these is connected with the whole theory of design training. The schools, realizing that drawing is the most important of the draughtsman's duties, seem to concentrate overmuch upon it. The draughtsman frequently gets little appreciation of the third dimension. Plans are considered, it seems to him, too much as abstract patterns, too little as living diagrams in which every spot has a definite, functional, structural purpose in an imagined building. Cleverness of indication is allowed to take the place of real knowledge and mastery of form; clever rendering sometimes hides lack of taste.

The draughtsman wonders why it would not be possible to co-ordinate his design-training with other necessary courses. One of these might be a course in architectural criticism, in which the basic principles of composition and detail could be learned by their application to actual modern buildings near by. Another, still more important, might be a course in the artistic use of materials, illustrated again by actual buildings rather than by mere samples, and including visits to stone-yards, lumber-mills, and the like, so that the student might really understand the methods of manufacture. This course should be combined with some instruction in modelling, so that the draughtsman might the more easily visualize his drawings and specifications, and so gain a fundamental feeling for materials, their texture, color, and proper use. This is the more important for the reason that unless the draughtsman gets this knowledge of the material craftsmanship of architecture in school, or unless he has a particularly sure innate personal feeling for it, Heaven knows there's small likelihood of his getting it in an office draughting-room!

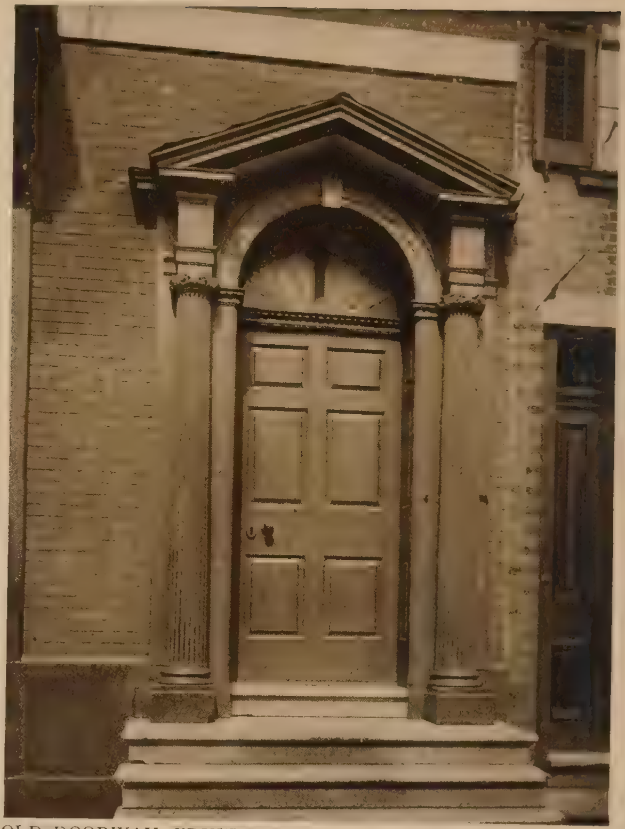
Another criticism arises from the fact that the draughtsman is likely to feel that the curriculum of his school is loosely organized and fragmentary. The architectural school of the present day is forced to teach such an infinite variety of subjects that it is small wonder that sometimes they seem disconnected. Yet the draughtsman wonders if the lack of apparent connection is absolutely unavoidable. Would it not be possible to arrange a course so that at any one time all the major subjects should emphasize one main idea? Could not each design problem the student takes be related in style to the period he is studying in history? Could not the design problems themselves be used to illustrate points in theory, and could not they be used to furnish the ornament to be modelled or drawn, or the engineering problems to be solved? Suppose, for instance, that no final examination in architectural engineering were required, but instead a detailed study and presentation of the most important structural members of his own thesis design? Would not the glamour of the design-training then, instead of taking the student's time and interest from his other courses, irradiate them as well? Perhaps all this is impossible, but the draughtsman wonders if it has been attempted.

More than all else, however, the draughtsman wonders why there is such a scarcity of real courses in professional practice. There are so many matters of vital interest connected with it that it seems a shame it is so neglected. Such a course would serve a double purpose: it would lessen the bitterness of the break between school enthusiasms and office routine, and it would set the minds of an increasing number of young men going busily on all the important related questions. Such a course should cover subjects like professional ethics, legal status of the architect, methods of office organization, with perhaps an inquiry into questions of profit-sharing, etc., the architect's relations to client and contractor, and the architect's place in the community.

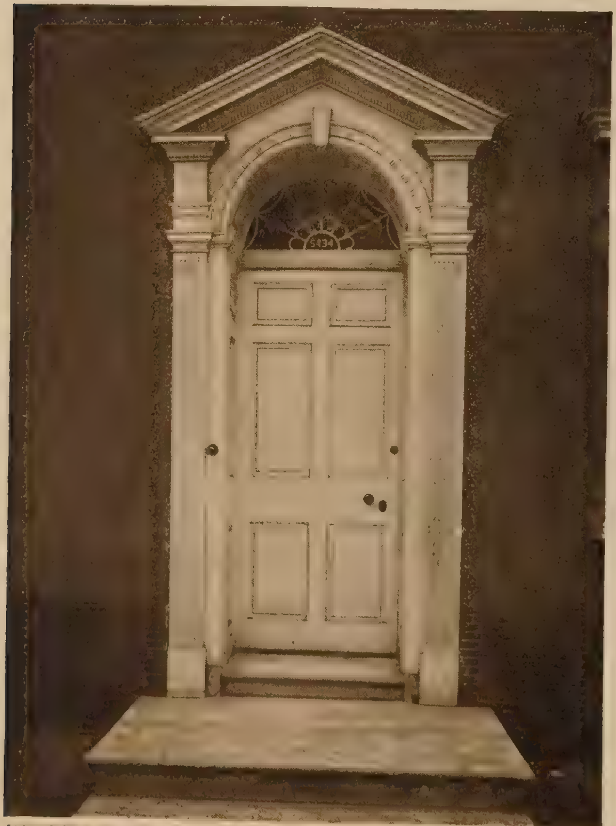
Such, then, are some of the thoughts of a graduate-draughtsman with regard to his education. More and more he realizes his debts to his school and its training. More and more he becomes conscious of the tremendous importance of the influence the schools exert upon the architecture of the country. And more and more he wants to see the schools take their places as the strongest possible stimuli toward the humanizing, the socializing, and the idealizing of the profession in even a greater degree than at the present time. Theirs is an opportunity big with promise.



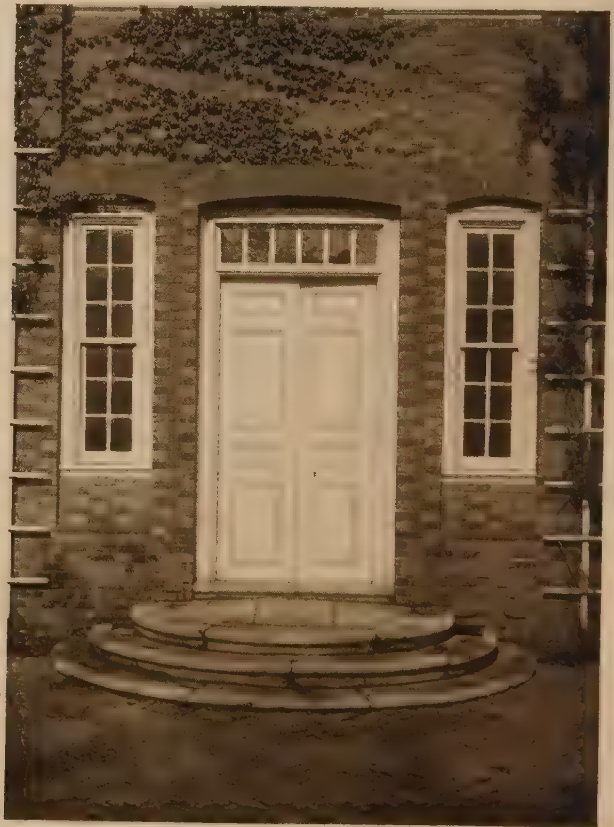
OLD DOORWAY IN SOUTH 4TH STREET.



OLD DOORWAY, FRUIT STREET.



DOORWAY, 5434 MAIN STREET, GERMANTOWN.



DOORWAY, STENTON HOUSE, 1730.

OLD DOORWAYS, PHILADELPHIA, PA.

A Cost System for the Small Architect's Office

By Harry Leslie Walker, M. A. I. A.

MANY of us have often heard a man compliment his architect most highly for his artistic skill, and almost in the same breath severely criticise him for the unbusinesslike methods he uses in the conduct of his work and the affairs of his clients.

A faulty and incomplete understanding on the part of the public as to just what constitutes the proper services of an architect is partially responsible for this condition of mind on the part of the client, but it is also true that in many instances architects are exceedingly careless, impractical, and inexact in their business relations, and seem incapable of realizing the importance of careful and systematic methods in the conduct of their practice.

Architecture is the greatest of all arts and the practice of it the most satisfying of all professions; but to practise architecture one must have clients. The clients of an architect are in most instances business men, men who have by careful, exact, and conservative practice in their business life accumulated the money which they expend in the erection of buildings. They have a right to expect from their architect the same careful use and accounting of the funds intrusted to him that they would from their attorney or any other trusted agent of their affairs. Before he can successfully serve his client an architect must have equal knowledge of, and interest in, the three distinct parts of the practice of his profession, *i. e.*, Design, Construction, and Business Relations. In this classification of his responsibility, the division of Business Relations is, perhaps, the most important of all. If he is weak in his knowledge and practice of the essential principles of accounting, contractual relations, real-estate values, insurance, and similar branches of business experience, it will be but a short time until his clients leave him to a continual and lonely struggle against the reputation of being an artistic but impractical man. No one can successfully conduct the business operations of others if he is careless and unbusinesslike with his own affairs.

One of the first things a man must know in order to conduct any business or practise any profession with satisfaction to himself or to his clients is the cost of producing the article which he sells, be it shoes, automobiles, magazines, or architectural services.

In an office enjoying a large practice there is usually employed a trained bookkeeper capable of developing and keeping up to date a system of accounts covering all of the financial relations of the office. The cost system outlined below is in no sense intended to supplant or take the place of a scientific accounting system such as may be handled by a trained bookkeeper; it is but a simple method which has been developed in an office having a moderate-sized practice, and which has been found accurate and in every way satisfactory for the purpose intended.

Every commission or "job" in the office should be given a serial number; this is essential to the proper handling of records of every sort, and is the principal foundation-stone of any system in an architect's office.

All moneys paid out by the office should invariably be paid by check, the only exception being the Petty Cash Account, and even this account should be kept supplied by means of a check from the General Account.

Below is given a transcript of the General Account of the office, showing all of the expenses for one month. For the purpose of clearness, the various sums drawn by the Architect for his personal use are omitted. Of course if there are one or more partners the predetermined weekly salary for each of them would show on this account in the same manner as those of the draftsmen and other employees. Where there are no partners in the business there is no particular necessity for fixing upon a weekly salary for the individual architect, as there is no division of profits to be made.

GENERAL ACCOUNT

December, 1918

Dec.			Dec.		
1	Balance in Bank 12/1/18	$672.23	3	A. B. Building Co., Office Rent	$100.00
	By Cash Job No. 317	324.16	3	N. Y. Tel. Co., Telephone	9.76
	Job No. 326	427.18	3	C. Towel Co., Towel Supply	2.00
	Job No. 299	864.27	3	A. B. Print Co., Blue-Prints	26.14
			7	W. Jones, Office Boy	6.00
			7	M. Williams, Stenographer	20.00
			7	A. Black, Draftsman	30.00
			7	C. Brown, Draftsman	20.00
			7	D. White, Draftsman	12.00
			14	W. Jones, Office Boy	6.00
			14	M. Williams, Stenographer	20.00
			14	A. Black, Draftsman	30.00
			14	C. Brown, Draftsman	20.00
			14	D. White, Draftsman	12.00
			21	W. Jones, Office Boy	6.00
			21	M. Williams, Stenographer	20.00
			21	A. Black, Draftsman	30.00
			21	C. Brown, Draftsman	20.00
			21	D. White, Draftsman	12.00
			28	W. Jones, Office Boy	6.00
			28	M. Williams, Stenographer	20.00
			28	Petty Cash Drawer	10.00
			28	A. Black, Draftsman	30.00
			28	C. Brown, Draftsman	20.00
			28	D. White, Draftsman	12.00
			30	"Architecture" Subscription	5.00
			30	A. Photographic Co., Photos Job No. 299	18.60
	Total receipts	$2,287.84		Total expenditures	$523.50
				Balance in Bank 1/1/1919	1,764.34
					$2,287.84

The Petty Cash Account for this same month would be as follows, it being noted that this account is kept supplied from time to time with cash drawn from the General Account.

PETTY CASH ACCOUNT

December, 1918

Dec.			Dec.		
1	Balance from November	$ 3.26	3	Car-fare Job No. 326	$ 0.10
28	Cash	10.00	6	Telegram Job No. 327	.50
		$13.26	10	Car-fare Job No. 326	.10
			10	Car-fare	.06
			15	Picture-Framing	2.00
			24	Photographs Job No. 326	6.00
					$ 9.30
				Balance forward to January	3.96
					$13.26

Every person in the office, including the Architect himself and excluding only the Office Boy and Stenographer, should keep a daily record of his time on a weekly time-card as shown below. To prevent laxity on the part of the men in filling out their cards each night it is well to have the Office Boy charged with the duty of caring for these cards and of seeing that they are properly filled out each evening and turned in at the end of each week. For the purposes of keeping this time record, every day is considered to have seven working hours, Saturday afternoons, holidays, etc., being charged to Miscellaneous on the time-cards. Any night work or overtime is kept on a special time-card and is entered as a special charge against the particular commission being worked on, and the number of hours of such work is not considered when calculating the proportion of overhead or general expense chargeable to each commission as explained hereafter.

WEEKLY TIME-CARD

Name, A. Black		Week Ending 12/7/1918						No. 54
PROSPECTIVE	JOB	M	T	W	T	F	S	TOTALS
	Misc.		2				3	5
	325	7	5	5		2		19
	326				4		4	8
	328			2				2
A. B. School					3			3
X. Y. Church						5		5
Totals		7	7	7	7	7	7	42

At the end of each month a summary is made of all the time-cards in the office, as shown below.

MONTHLY SUMMARY OF TIME-CARDS

NAME	WEEKLY RATE	HOURLY RATE	MISC.	325	326	327	328	340	A. B. SCHOOL	X. Y. CHURCH	JONES HOUSE	SMITH HOUSE
A. A. Architect			42	4	6	5	3	7	44	31	16	24
A. Black	30.	.71	15	10	43		45	15	30	15		9
C. Brown	20.	.47	12		40	64	20	18			21	7
D. White	12.	.28	17	41	25	46	20	19	10	4		
Total, 728			86	55	114	115	88	59	84	50	37	40

The share of the total monthly expense of the office chargeable to each commission worked on during that month is made up of the various items picked out of the General Account, the blue-print bill, the Petty Cash Account, the Monthly Summary of Time-Cards, and of a certain proportion of the Overhead or General Expenses for the month.

The share of Overhead or General Expenses to be charged to any particular commission bears the same relation to the entire amount of General Expenses for the month as the total number of hours charged to this commission as shown on the Monthly Summary of Time-Cards bears to the grand total of all hours for the entire month.

The monthly cost of a commission or prospective piece of work being worked on in the office is divided in three parts, which are ascertained as follows:

First: Multiply each man's hourly salary by the total number of hours which he has spent on the job during the month.

Second: Separate and add to the cost of the job all special expenses that may be directly chargeable to that particular piece of work, such as travelling expenses, car-fare, telegrams, long-distance telephone-calls, blue-prints, special supplies, etc.

Third: Add together all general overhead expenses of the office which can not be separated and charged to any particular job, such as miscellaneous time of salaried men, rent, janitor service, stenographers, office boy, telephone, towel supply, expendable materials and supplies, such as paper, cloth, pencils, paste, etc.

Divide this sum by the total number of hours spent by everybody in the office on all jobs, and multiply this result by the total number of hours spent by everybody in the office on this particular job, and the result is the amount of General Expenses or Overhead to be charged to this particular job for this month.

The total of the three sums found as indicated above is the cost to the office of this particular commission for this particular month.

An example of how this works is given below, the items being picked out of the General Account, the Petty Cash Account, the monthly blue-print bill, the Monthly Summary of Time-Cards, etc., and include all items of expenditure which cannot be directly charged to any particular commission or prospective commission being worked on in the office during the month.

OVERHEAD OR GENERAL EXPENSES FOR MONTH

Office Rent	$100.
Telephone	9.76
Towel Supply	2.
Office Boy's Salary	24.
Stenographer's Salary	80.
Miscellaneous Blue-Prints	1.36
Subscription to "Architecture"	5.
Car-Fare	.60
Picture-Framing	2.
A. Black, Miscellaneous Time, 15 hours @ .71	10.65
C. Brown, " " 12 hours @ .47	5.64
D. White, " " 17 hours @ .28	4.76
	$245.77

Following the procedure outlined above, the cost for Job No. 326 would show for this month as follows:

Dec.		
	A. Black, 43 hours @ .71	$ 30.53
	C. Brown, 40 hours @ .47	18.80
	D. White, 25 hours @ .28	7.
3	Car-Fare	.10
10	Car-Fare	.10
24	Photographs	6.
	Blue-Prints	6.18
	General Expenses, 114/728 of $245.77	38.48
		$107.19

The monthly cost of the A. B. School, a prospective commission, would be as follows:

Dec.	
A. Black, 30 hours @ .71	$21.30
D. White, 10 hours @ .28	2.80
General Expenses, 84/728 of $245.77	17.37
	$41.47

All of the above may seem trite and elemental to some men who are habitually systematic and methodical in conducting the affairs of their office, but I trust that it may prove of some assistance to those who have found themselves uncertain as to the real cost of producing any particular piece of work. Architects temporarily associated on some particular building sometimes seriously differ as to the division of profits, and this difference of opinion usually arises over the question as to what is the real cost of doing the work in each office. In obtaining a fair settlement with a particularly recalcitrant client, it is sometimes essential for the architect to be able to demonstrate beyond doubt what has been the actual cost of producing the work. It is becoming customary for architects to base their fees on the cost of doing the work plus a lump sum for their own personal time, and, of course, such an agreement with a client is absolutely impossible unless the real cost is plainly demonstrable.

House of W. V. Lawrence

THE residence of Mr. W. V. Lawrence, in modernized Tudor style, was completed in April, 1918, on a site of ten acres of partly wooded land about one mile from Bronxville station. The house crowns the top of one of Westchester's highest hills, overlooking the golf-links of Lawrence Park and commanding views of surrounding country between Yonkers and the Harlem railroad.

The construction of the house consists of 8-inch exterior walls of Fisklock tapestry brick of a deep red in color with wide sunken joints of darkly colored mortar. The trimmings of exterior, loggia columns, etc., are of artificial stone stained to imitate weathered stone. The interior walls are of hollow block, floors are of reinforced cement and block so that the building is practically fireproof. The roofs are laid up of hand-quarried slate from Vermont, of irregular sizes, starting with 10-inch courses at eaves and ranging up to 5 inches at ridges. The valleys are fumed and represent curved surfaces and so avoiding sharp angles.

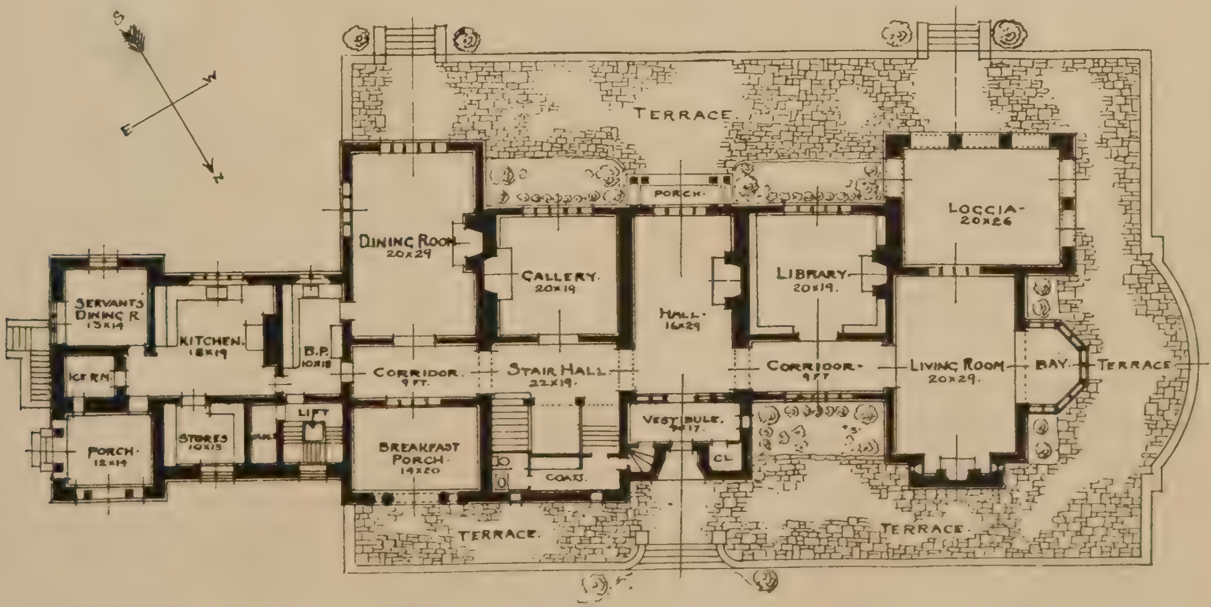
Loggia.

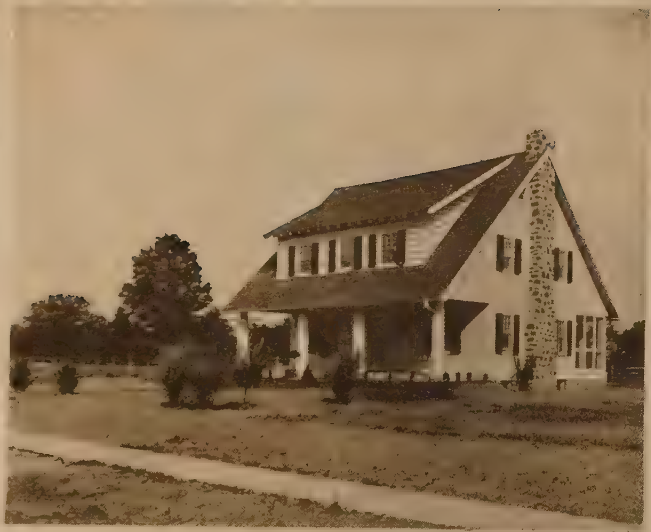
The kitchen wing, finished in stone ashlar on first story and timber and stucco for second story and gables, gives a variety to the grouping. The terrace floor is laid in irregular stone slabs with wide joints filled with earth so that grass may grow between stones. The windows throughout have cement sash set with leaded glass.

The plan follows the English type in that the main rooms open on corridors and do not communicate en suite, thereby giving each room privacy.

The house is so placed that the corridors face to north and all living-rooms south, consequently each room has sunlight in abundance. The service quarters of house are unusually generous in size and number of rooms, and special attention has been paid to sanitary requirements, all plumbing being of white enamelled ware. The floors and walls of the first floor of kitchen-wing are laid up with white glazed tile.

An elaborate plan has been laid out by the architects for the grounds, which are very rolling and in parts wooded with the fine old oaks of Westchester County. Provision has been made in the landscape scheme for garden, drives, summer-houses, garage, and gardener's cottage now built. The grounds, owing to war conditions, have been delayed in their completion, but in time will have the setting which a house of this style commands. The oak forest and golf-links have already added interest in making a typically English place of a modern residence in a New York suburb.



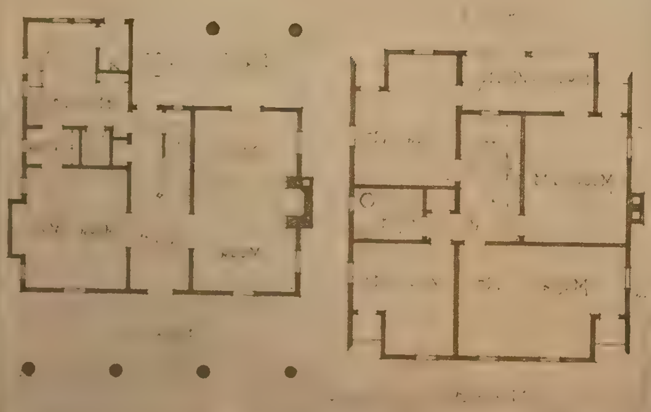


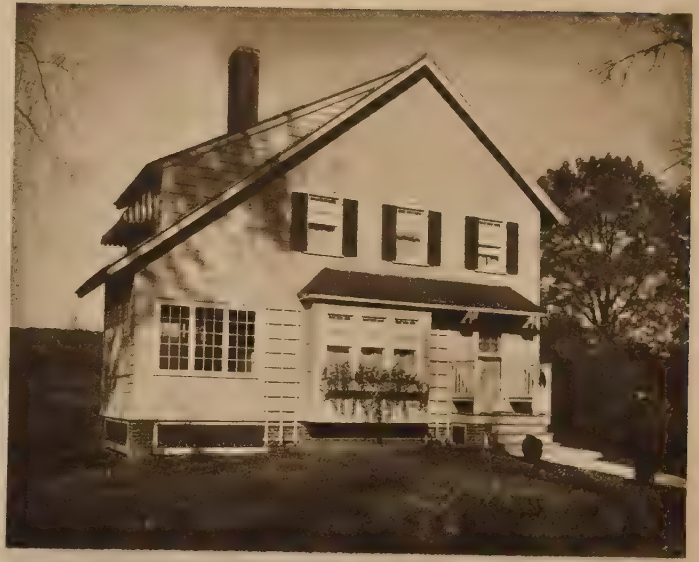
[illegible], N. J.

[illegible] F. PRIEST, ESQ.

ERNEST [illegible] SIBLEY, ARCHITECT

[illegible], N. J.



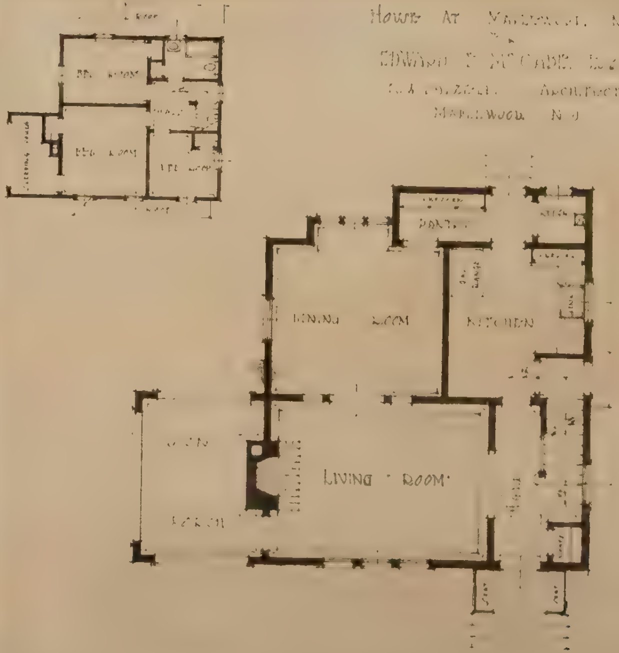


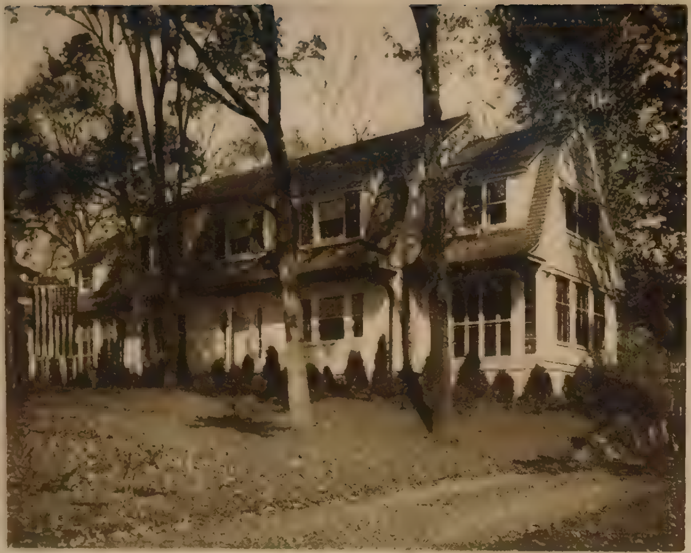
HOUSE AT MAPLEWOOD, N. J.

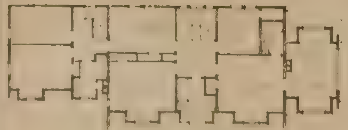
EDWARD F. McCABE, ESQ.

[illegible], ARCHITECT

MAPLEWOOD, N. J.







[illegible]

[illegible] ESQ.

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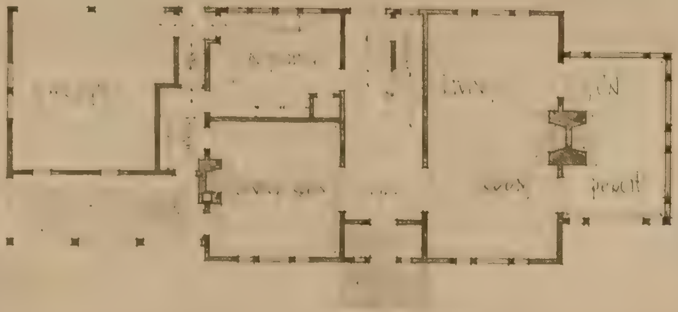
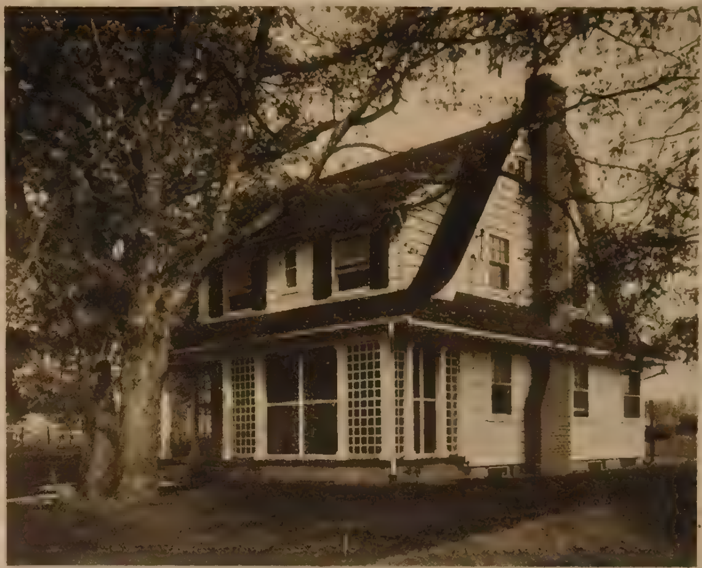
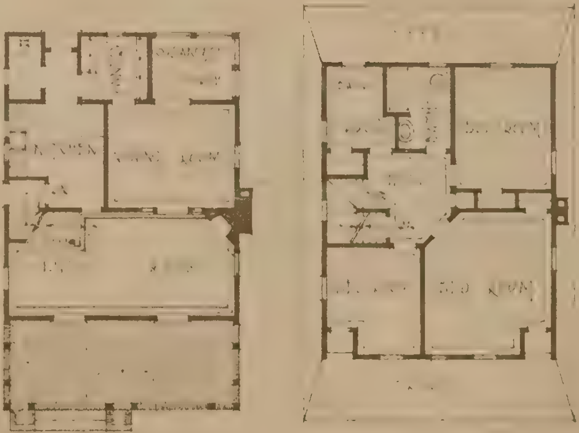




HOUSE AT MAPLEWOOD, N. J.
FOR
E. B. THAYER, ESQ.
KENNETH W. DALZELL ARCH'T.
MAPLEWOOD, N. J.



Italy Will Take Large Quantities of American Lumber

ONE of the principal markets for American lumber will be found in Italy, according to a special cable to the Italian American News Bureau. Reconstruction work in the recently invaded territory to the northeast of Venice is already making large demands for building material, and plans for building projects contemplate the expenditure of millions of lire by the Italian Government.

Import demands on the part of Italy, according to Charles T. Henderson, director of the Italian American Bureau, already indicate that anywhere from six to eight billion board feet of all kinds of lumber and timber will be needed within the first year of peace.

Of course Italy's forests will help to contribute a share of this product, but anywhere from two to three billion feet will have to come from the outside. Fully 50 per cent of the Italian forest supply has been cut out. The authorities are now bending their effort toward saving olive, mulberry, and fruit trees, and a decree has been promulgated forbidding the cutting of them.

Director Henderson has been asked by the Italian Government to make inquiry as to the possibilities in the United States for supplying the demand for building materials which the cessation of hostilities had brought about.

The lumber industry in Italy was given a new impetus when Italy entered the war. Temporary barracks for the soldiers and dwellings for the refugee civilian population were erected, as well as quickly constructed shelters for provisions and munitions.

Italy is not rich in forests except in the mountainous regions in the north, bordering Switzerland. In 1877 the state took in hand the forestry of the country, and made certain laws regarding the planting of trees and the cutting of them. The temporary buildings for war purposes required great quantities of lumber; hence the situation the country now finds itself in.

Much of the lumber needed undoubtedly will be sent from the United States, the varieties in demand being spruce, hemlock, southern pine, and redwood. The demand will depend largely upon the price asked, however, for in normal times lumber is not an essential for building purposes in Italy.

Not only is there a surplus of labor in Italy but the country is rich in clay for brick and tile, and in building stone of various kinds—limestone, lime, and cement. Because of the scarcity of lumber which has existed for centuries, a minimum amount of lumber has been used, buildings and houses having been constructed at a comparatively low cost from stone, brick, and other materials.

The stone is used for foundations, for walls, and for partitions, and when obtainable in suitable shapes and sizes it is even used to finish door and window openings and to top walls.

In Italian buildings the horizontal partitions are made by placing light iron beams in rows and laying on them flat arch hollow tiles. The roofs are generally flat and tiled. In the agricultural districts the barns usually are attached to the houses and of the same material, the floors being of earth or stone, the mangers and racks of stone slabs set in iron frames. Unthreshed grain is stacked in the open.

Announcements

Mr. Albert H. Dow, Mr. Hamilton Harlow, and Mr. Kenneth C. Kimball announce that they have formed a partnership with the name of Dow, Harlow & Kimball, Architects and Engineers, with offices at 101 Tremont Street, Boston. Mr. Dow has designed many prominent public buildings in New Hampshire and Massachusetts, including the Carroll County Court House and the Rockingham County Administration Building. Mr. Harlow is a well-known young Boston architect, and a graduate of Technology. Mr. Kimball is an engineer, and a well-known Dartmouth man.

The firm of Wallis and Goodwillie has been dissolved by mutual agreement.

Frank E. Wallis announces that he has taken into partnership Richard P. Wallis, graduate of the Massachusetts Institute of Technology, 1912, who has been engaged in engineering work in Albany, Cleveland, Minneapolis, and in the U. S. War Department Construction Division.

The firm will henceforth be known as Frank E. Wallis & Son, Architects and Engineers, 56 West 45th Street, New York City.

Mr. E. H. Bennett of Chicago announces the formation of a partnership of Edward H. Bennett and William E. Parsons, as consulting architects.

A. G. Zimmermann, architect, announces the removal of his offices from 10 South La Salle Street, Chicago, to 85 Ninth Avenue, near Sixteenth Street, New York City, January 20, 1919.

Earl W. Porter and Ernest F. Schreiber announce their return from service in the aviation section of the army, and the re-opening of their offices for the practice of architecture under the firm name of Porter & Schreiber, in Rooms 596–598, Brandeis Theater Building, in Omaha, Nebraska. Telephone, Tyler 3176.

The architectural firm of Banigan, Mathers & Thompson, Toronto, announce that those members who were on active and industrial war service have resumed the practice of architecture. The firm announce that they have occupied their new offices, 7 and 9 King Street E., 4th floor.

Book Reviews

IF the life of a nation is reflected in its architecture, the converse is true that the architecture is an index to the life of the people. In an interesting book recently published, "A HISTORY OF EVERYDAY THINGS IN ENGLAND," by Marjorie and C. H. B. Quernell, there are brought together many facts and illustrations of interest to the student of English manners and customs, and to the architect for the comments on the various early buildings. The pen and ink illustrations of certain particular features, such as the interiors of the old English halls and the monasteries, and the tables giving lists of important buildings in "The Norman Period," "The Early English," "The Decorated," "The Perpendicular," have historic interest.

Charles Scribner's Sons, New York; B. T. Batsford, London. 12mo. Cloth. $4.00.

ARCHITECTURAL STYLES FOR COUNTRY HOUSES. The Characteristics and Merits of Various Types of Architecture as Set Forth by Enthusiastic Advocates. Edited by Henry H. Taylor. Robert M. McBride & Co. 4to. Cloth. $2.50 net.

New and enlarged edition of a book designed especially for the direction and assistance of the layman who is planning a country home. It has many illustrations of certain popular types of houses in various parts of the United States.

Convenient Pocket Reference Charts

A WIRING chart for determining the proper wire size for use on circuits of 110–125-volt country-home lighting systems has just been prepared by the Engineering Department, National Lamp Works of General Electric Company. The steady demand for the low voltage (28–32 volts) wiring chart for country homes, distributed in July of last year, shows that the information contained thereon is valuable and conveniently arranged. For this reason, the chart on 110–125-volt systems is designed along the same lines.

As indicated above, the information on the chart for 110–125-volt systems may be used for all voltages within the range. Either chart may be obtained on request from the Engineering Department, National Lamp Works of General Electric Company, Nela Park, Cleveland, Ohio.

In connection with the high and low voltage systems, it should be noted that there is a fundamental difference between the two designations, 28–32-volt lamps and 110–125-volt lamps. In the first instance, a single class of lamps, any one of which is designed to operate on any voltage within the range indicated, is referred to; but, in the latter case, there is a different lamp for each individual voltage between 110 and 125 volts. While the characteristics of all the lamps in this range are such as to allow of their being grouped together for many purposes, as in the wiring chart just prepared, it should be remembered that a 110-volt lamp is to be burned only on a 110-volt circuit; a 115-volt lamp on a 115-volt circuit, or, in general, each lamp only on a circuit of the voltage for which that lamp was designed.

A New Catalogue

"Dixon's Graphite Products" is the title of a new pocket catalogue issued by the Joseph Dixon Crucible Company of Jersey City. While not so complete as the large general catalogue, it furnishes a good idea of the variety of products made by this old concern.

Pages have been devoted to lists of articles especially for mills, railroads, automobiles, etc. The descriptions are brief, but the company will gladly send pamphlets dealing in detail with any of the individual members of the line.

This new catalogue may be had for the asking.

A Building Deficiency of $500,000,000 in Six Eastern States

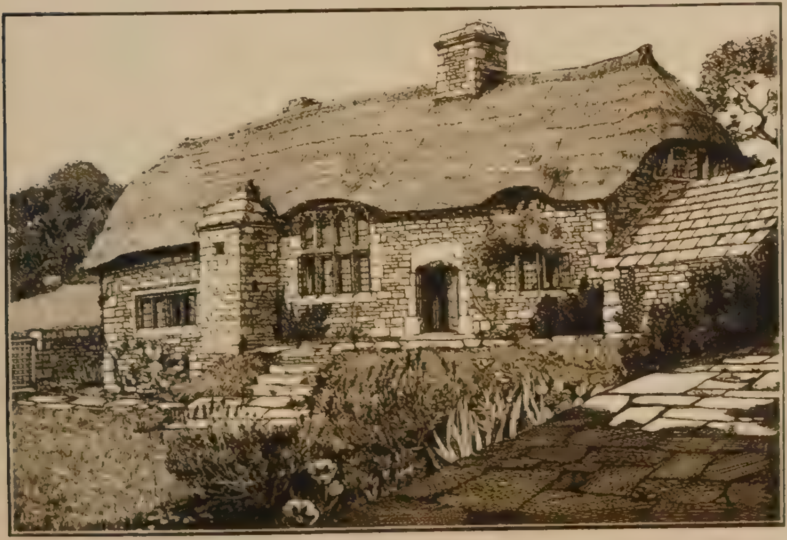
IT will take approximately $500,000,000 expended in buildings in Maine, New Hampshire, Vermont, Massachusetts, Rhode Island and New York to make up the building deficiency incident to the war. This construction work must be in addition to the normal, current requirements of 1919.

The Information and Education Service of the U. S. Department of Labor has issued the results of a study of building needs in these six States, made by the Economics Section of the Division of Public Works and Construction Developments. Taking the building permits issued in 1914, 1915 and 1916 to obtain an average representative of the normal year's requirements, and comparing this average with the permits actually issued during the war years of 1917 and 1918, the Information and Education Service establishes the actual reductions in buildings in twenty-one cities.

To obtain an approximation of the building deficiency in the several States, it is assumed that the building deficiency in the State is in the same ratio to those in the cities as the property valuations of the State are to those of the cities.

Nine cities form the basis for the figures in New York State, and from the actual decreases in building activities in these it is estimated that New York's building deficiencies for 1917 and 1918 are not less than $236,000,000. Massachusetts shows up $124,000,000 short, the basis for the computation being actual falling off in the building permits in seven important cities of which Boston is one. Maine, New Hampshire, and Rhode Island show $8,000,000 or more, and Vermont's building deficiency is $4,960,000.

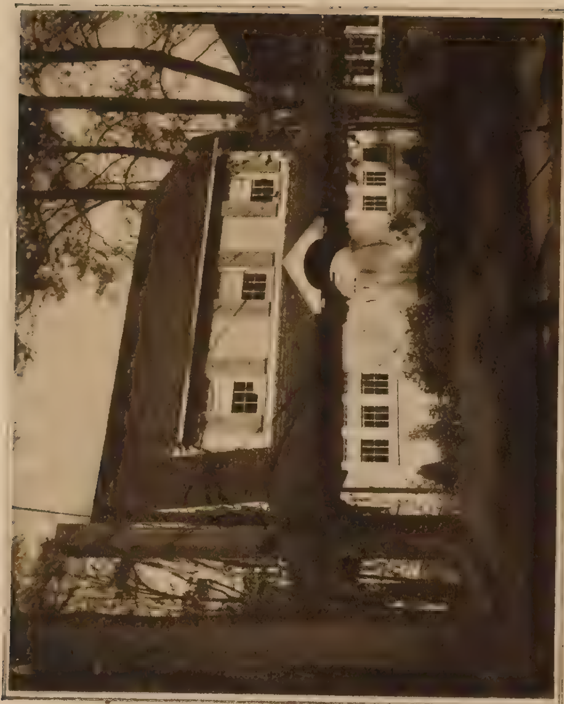
New York City shows a deficiency of $173,192,304, while the figures for Boston are $70,258,082. The normal building activities for 1917–18 in New York, on the basis of building permits issued in 1914–15 and 1916, should have been $318,315,367—they were but $145,123,063. Boston to have approximated normal should have shown building permits totalling $100,898,780 for 1917 and 1918. Its total was but $30,640,698.

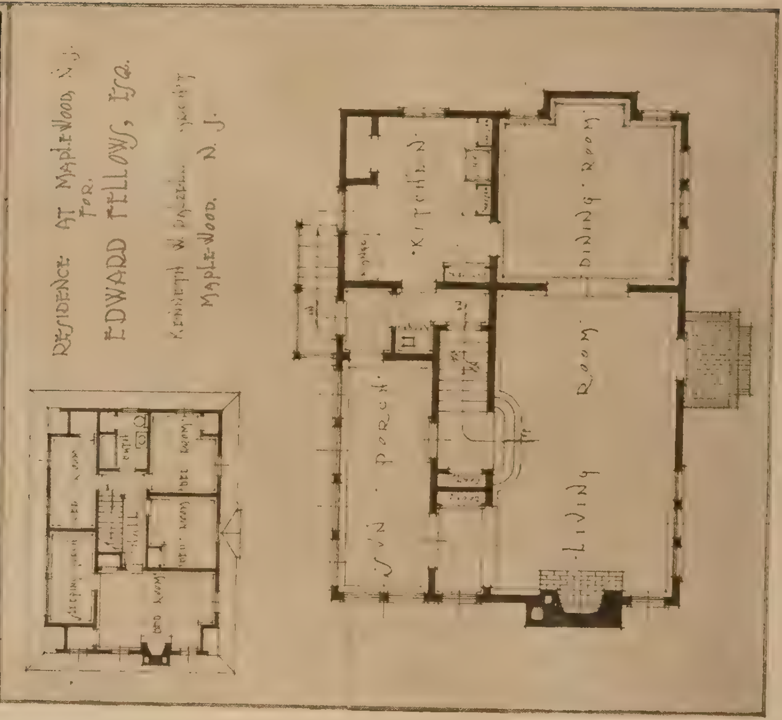


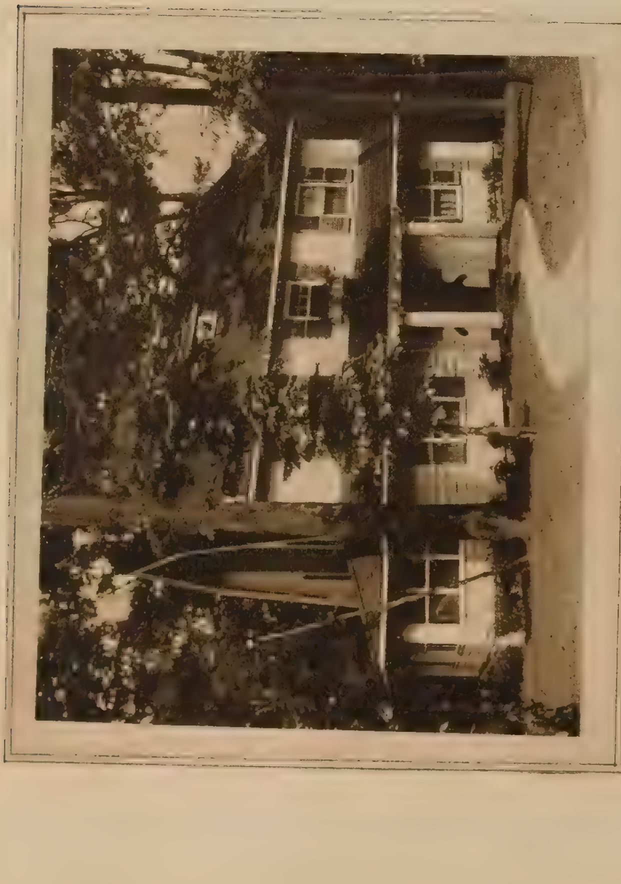
A Cottage in Somersetshire

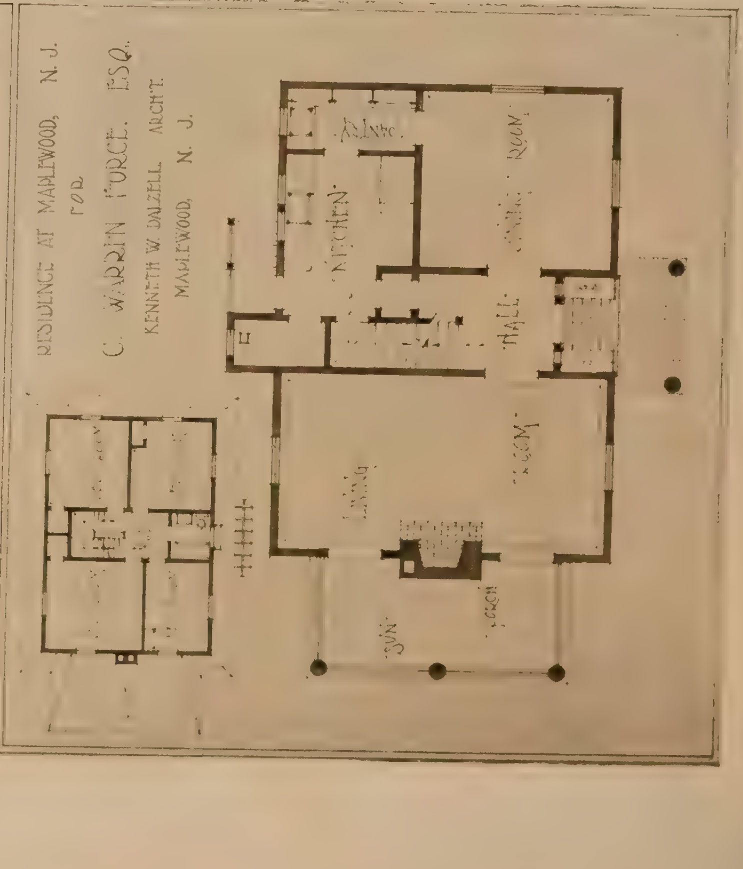
This cottage, being destined for a gentleman and his wife who do their own work, it appeared that a somewhat more architectural treatment was necessary than is usual. The walls are to be of Ham Hill stone and the roof of thatch. A barrel ceiling of Hyrib, cement-plastered, will form the inside of the roof, also affording a fireproof building. The woodwork is oak, touched with color and gilt, and the fireplaces are to be of stone, also the staircase in the projecting bay. The architect is Mr. Philip Tilden.

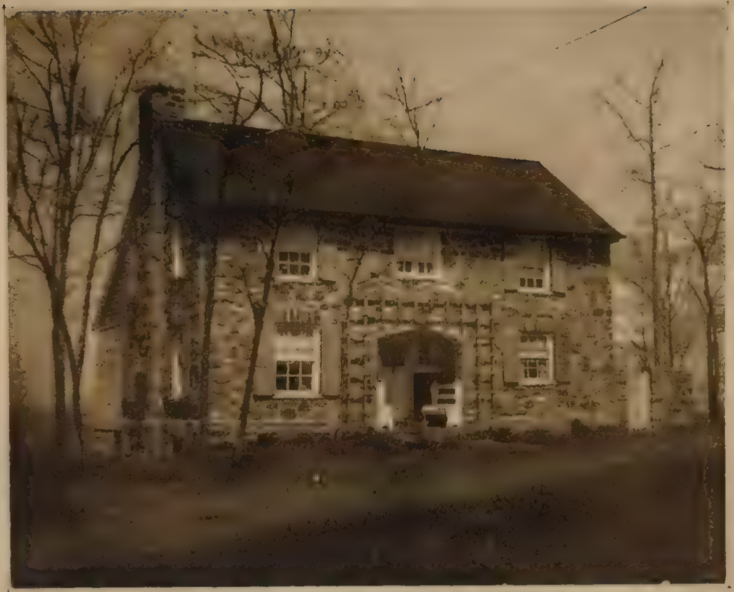
From the Building News, London.



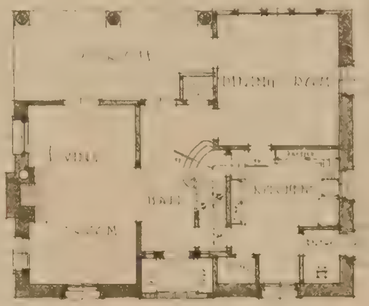

RESIDENCE AT MAPLEWOOD, N.J.
FOR
EDWARD FELLOWS, ESQ.
KENNETH W. DALZELL ARCH'T
MAPLEWOOD N.J.
KITCHEN
DINING ROOM
SUN PORCH
LIVING ROOM



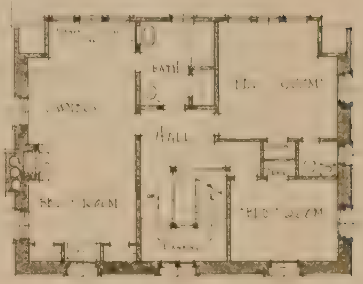

RESIDENCE AT MAPLEWOOD, N.J.
FOR
C. WARREN FORCE, ESQ.
KENNETH W. DALZELL ARCH'T
MAPLEWOOD, N.J.
DINING ROOM
KITCHEN
HALL
LIVING ROOM
SUN PORCH



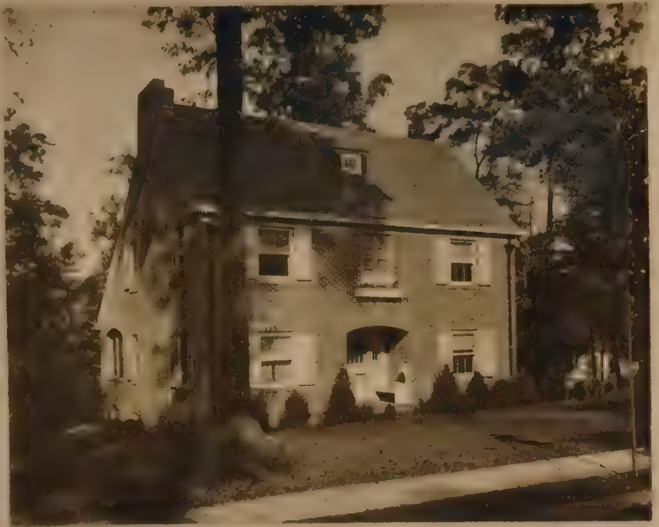
RESIDENCE AT ESSEX FELLS, N. J.
FOR
E. LESLIE WINPENNY, ESQ.
KENNETH W. DALZELL, ARCHITECT
MAPLEWOOD, N. J.



FIRST FLOOR PLAN



SECOND FLOOR PLAN



RESIDENCE AT MAPLEWOOD N. J.
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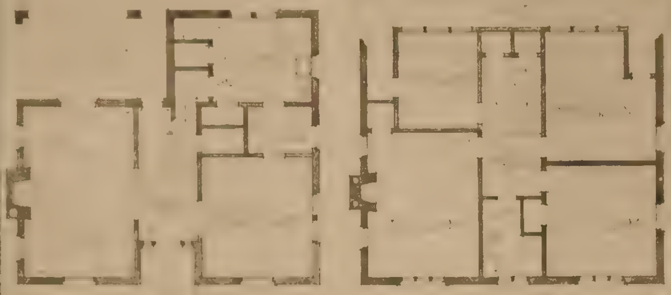

Danger Signals for Specification Writers

By David B. Emerson

IN a former article I gave a general outline of the leading requirements in specification writing. In this article I will detail some items which should be embodied in specifications and some which should be avoided, and the general reasons therefor. As I stated in my previous article (February number), what I write is not intended so much for the experienced specification writer as for the younger members of the profession, and although some things may appear very trivial to the older readers, a great many of them were learned through unpleasant personal experiences. In writing a specification for any particular building, the first points to be considered are the local conditions, the materials which can be obtained, the local labor conditions, and the local building code, if the latter exists. For to specify any materials which are unobtainable, or which are prohibited by the code, is liable to raise questions on the part of the contractors and cause considerable trouble for the superintendent on the work.

This, naturally, only applies to buildings which are to be built at a distance from the office, as it is understood that the specification writer, no matter how inexperienced he may be, is reasonably well acquainted with the conditions which prevail in the home town. In calling the reader's attention to the various points in the specifications which may save trouble and worry for the architect, the owner, and all concerned, the writer will take up various parts of the work in much the order in which the specifications would be written.

In concrete work, where any large amount of concrete walls are to be used, always be sure to specify that a sufficient number of expansion joints shall be made, as otherwise serious cracking of the concrete may occur.

Also, in specifying concrete, attention should be paid to specifying the amount of water which is to be used in mixing the concrete, as an excessive amount of water decreases the strength of the concrete; about six gallons of water to a bag of cement being the average amount which should be used. Whenever concrete or cement stucco are to be painted, never specify a paint having linseed-oil as a vehicle, as the alkali in the cement will saponify the oil and the larger part of the paint will be washed off by the first heavy rainfall. The safest method is to specify some reliable and well-tried concrete coating or primer, of which there are many on the market.

In specifying cut stone-work, care should be taken to specify the thickness of all ashlar, four and eight inches for alternate courses being ample and sufficient in ordinary work, but eight and twelve inches should be specified for high-class work. All joints should be specified to be cut back one and one-half inches from the face of the stone. All limestone and marble should be specified to be laid up in mortar composed of an approved brand of non-staining cement, and the backing up brickwork coming in contact with the stone should also be laid up in non-staining cement mortar. All top joints in copings, cornices, pediments, etc., should be specified to be caulked with oakum and pitched or pointed with some approved plastic compound. All anchors, dowels, clamps, and other ironwork used in the securing of stone-work and terra-cotta should be specified to be galvanized, as plain iron is liable to rust and stain the stone or terra-cotta. In very high-class work, where cost does not have to be considered, use copper clamps and dowels in all stone-work.

Wherever structural steel is to be embedded in concrete or brick masonry, do not specify painting the field coat with any paint having linseed-oil as a vehicle, for the same reason as previously stated relative to painting concrete. Specify a paint having a bituminous base, as it is not affected by alkalies and also has excellent qualities as a damp resistant. When specifying pipe railings, never specify galvanized iron pipe or fittings, specify black iron; as galvanizing fills the pores, and paint will not adhere as well to the smooth surface and is liable to peel off.

Most specifications for architectural bronze work are drawn very loosely, often only saying "all bronze work shall be the best statuary bronze," which means very little. To obtain the best results the alloy should always be specified. One of the leading bronze foundries recommends an alloy of not more than 7 per cent tin, not more than 3½ per cent lead, the balance to be pure copper. Also, the finish should always be specified. For high-class work it should be all hand-chased. For cheaper work, statuary finish, which merely consists of removing the fire skin from the castings and filing the bright parts, may be specified. Furthermore, in specifying bronze work, it should be stated that where more than five duplications are wanted, the patterns must be highly chased metal patterns, otherwise the castings will not be clean and sharp.

Wherever wall tile are specified to be set on plastered partitions, the plastering should be done with a one to two Portland cement mortar, deeply scratched to give bond for the mortar in which the tile is set. Always specify metal lath on all stud partitions behind tiling. Interior marblework should always be specified to be set in plaster of Paris, and all clamps and dowels should be specified to be of copper or brass.

All fragile marbles, like Pavanozza or Sienna, should be specified to be backed up with a hard, cheap marble, to prevent fracture.

All floor sleepers which are to be bedded in cinder fill, and all blocking and other timber which is to be bedded in concrete, should be specified to be treated with a brush coat of an approved creosote wood preservative.

Whenever double flooring is to be laid in a fireproof building, on top of cinder fill never specify tongued and grooved stock for the under flooring; always specify square-edged stock, laid with open joints, for if tongued and grooved stock is used, and the joints are driven up tight, there is no chance for the moisture to escape, consequently a swelling and buckling of the under floor, causing damage to the finished floor.

When copper roofing is to be specified, either flat seam or standing seam, never specify heavier than sixteen-ounce copper, as the expansion and contraction of heavier copper has such a pulling force that it will tear loose. Wherever copper is to be soldered, always specify that the edges of all sheets shall be tinned, as tinning makes a much better holding surface for the solder. In all copper work such as roofs, gutters, leaders, or skylights, always specify that the contractor shall make proper allowance for expansion and contraction of the metal.

In specifying roofing, either shingle, slate, or tile, always call for all nails to be either galvanized or copper-coated, and in all high-class work specify composition or yellow metal nails for slate or tile, as plain iron nails rust out very rapidly and cause shingles, slate or tile to loosen, thereby causing leaks in the roof.

If frame buildings are to be built at the seashore, always specify that all nails, except those to be used on interior trim, shall be galvanized, as the salt air corrodes plain iron nails and materially shortens the life of the building by allowing water to get to the sheathing and frame and rotting them out.

Wherever wood louvers are used for ventilating the roof space in a building, always specify a moderately fine copper mesh to be nailed directly behind them, as it will effectually prevent the snow from blowing in and damaging the ceilings, and also will keep out birds and insects. Always in all good work, specify that the back of all hardwood trim and wainscoting shall be painted one coat of red lead and boiled linseed-oil, to keep out dampness and to prevent warping and swelling of the wood. All sash should be specified to be glazed at the building, for if they are glazed at the mill and then transported to the building, the putty still being soft, the glass may loosen, and the loose glass will rattle in the wind, making it unpleasant for the occupants of the building, and water will get between the glass and the putty and cause the sash to rot.

All metal sash should be specified to be glazed with a self-hardening putty, composed of whiting, white lead, litharge, and raw linseed-oil, proportioned about 12 to 14 per cent oil, 5 per cent litharge, 78 per cent whiting, and the balance white lead, as ordinary putty will not harden on metal sash. All galvanized sheet metal work should be specified to be thoroughly cleaned with vinegar or acetic acid to remove all grease before painting, which helps to prevent peeling which is so common with galvanized sheet metal work; also, specify to paint the first coat with red lead, into which has been mixed a wax solution, which is made as follows: melt a cup of pure beeswax, and when it has reached a fluid consistency, pour it into a gallon of raw linseed-oil, heated to 200 degrees Fahrenheit. For use add one quart of the wax solution to every one hundred pounds of mixed red-lead paint.

In the writing of plumbing specifications, always, where any fair-sized supply pipe is to be used, and if the local water-supply is taken from a pond, lake, or river, call for a fish-trap to be placed on the supply, on the street side of the metre, to prevent fish, weeds, and other foreign matter from entering the metre. All wrought supply and waste pipe should be specified to be genuine, puddled wrought iron, for although the cost is greater than steel pipe, the very rapid corrosion of steel pipe makes its use a very doubtful economy. Where cost has to be considered, and the sanitary code does not forbid its use, it is allowable to specify standard cast-iron pipe; but wherever pipe is to go under ground, always specify extra heavy. Never specify standard pipe in a building to be built near the seashore, as the salt air corrodes iron very rapidly, and only extra heavy pipe should be specified. If a building is over twelve stories in height, an expansion joint should be called for on the hot-water rising lines.

If it is in any case absolutely necessary to run any wrought-iron pipe in cinder fill, the pipe should always be specified to be coated with neal cement, or some approved preservative compound, for if not protected the pipe is very liable to corrosion, either from the chemical action of the sulphur in the cinders, or to electrolitic action of the carbon in contact with the damp iron. Always specify that the plumber shall install a heavy sheet-lead pan under the floor slabs of all shower-baths, the sides of pan to be carried up at least four inches around all sides and made water-tight; unless this is done there is always liable to be leakage at the joints between the floor slab and sides of the shower-stall, with the consequent damage to the ceilings below.

In fireproof buildings the floor slabs under all toilet and bath rooms should be specified to be waterproofed, and all pipes which run through the floor slabs should be specified to have waterproof collars, to be properly connected to the waterproofing over the slabs. This should be done to protect the ceilings below in case of leaks or overflows in the plumbing system.

In writing specifications for gas-piping or electric-wiring in new fireproof buildings, always call for all pipe or conduit to be laid top of floor beams, instead of beneath them, and all cutting to accommodate pipe or conduit shall be done not more than three feet from the ends of the beams, and in no case shall it be more than two inches deep, for in many sections of the country where there are no provisions in the building codes prohibiting it, gas-fitters and electricians will cut out on the lower edge of the beams to accommodate pipe or conduit, which will materially weaken the beam, as the lower fibres of all floor beams are intensive, also the pipe or conduit must be supported by straps to prevent sagging, whereas if laid top of beams it is thoroughly supported by the beams.

One thing which I would call the reader's attention to particularly is the emphasizing in the specifications that wherever patent compounds such as ready-mixed paints, enamels, waterproofings, floor hardeners, etc., are specified, they must always be applied strictly in accordance with the directions of the manufacturers, and that no adulteration of any sort or kind shall be permitted.

When specifying patent preparations of any of the above-mentioned kinds, do not make a practice of specifying new and practically untried materials, for ambitious chemists and manufacturers are bringing out new compounds steadily, giving them a few not overexhaustive laboratory tests and then trying, by means of alluring advertisements and a line of very pretty samples, to persuade the architects to specify the materials, that is, in other words, "to try it on the dog," and the thing for the specification writer to beware of is to avoid being placed in the position of the dog.

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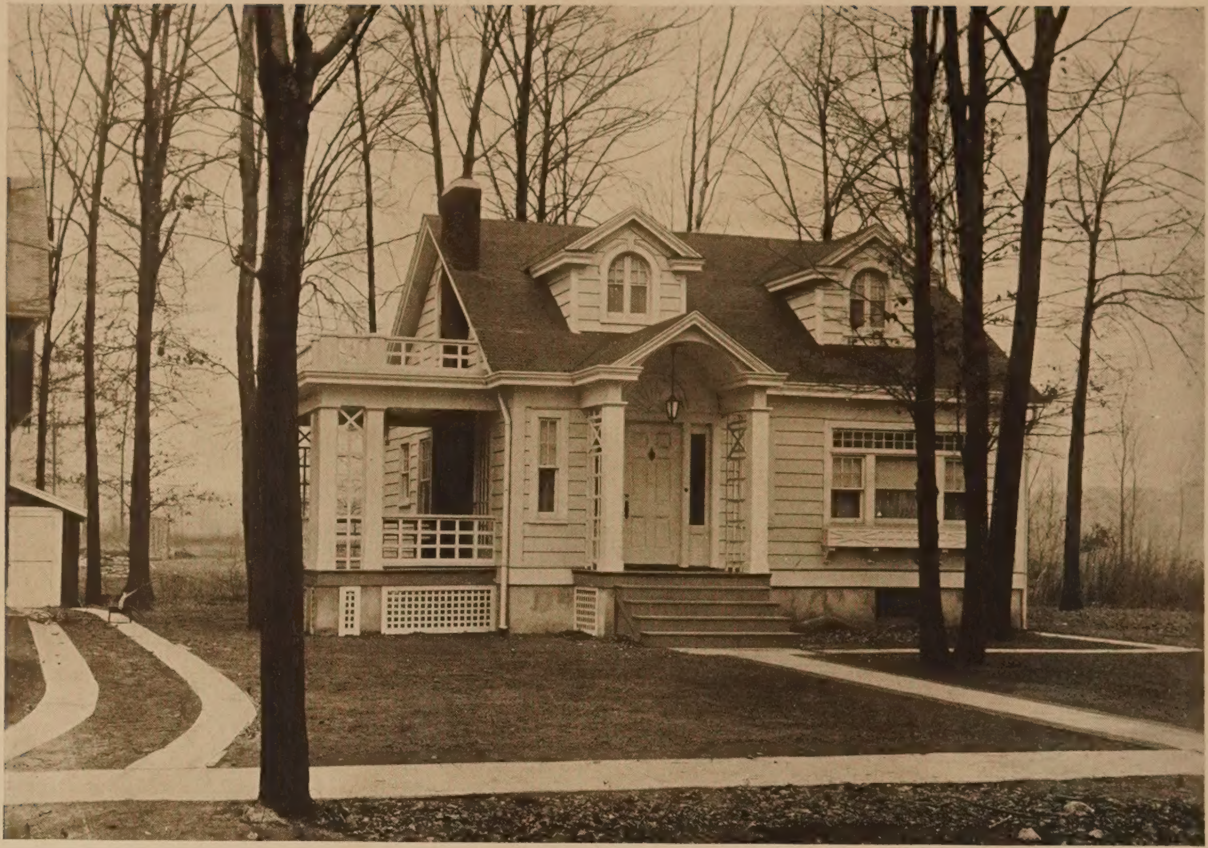
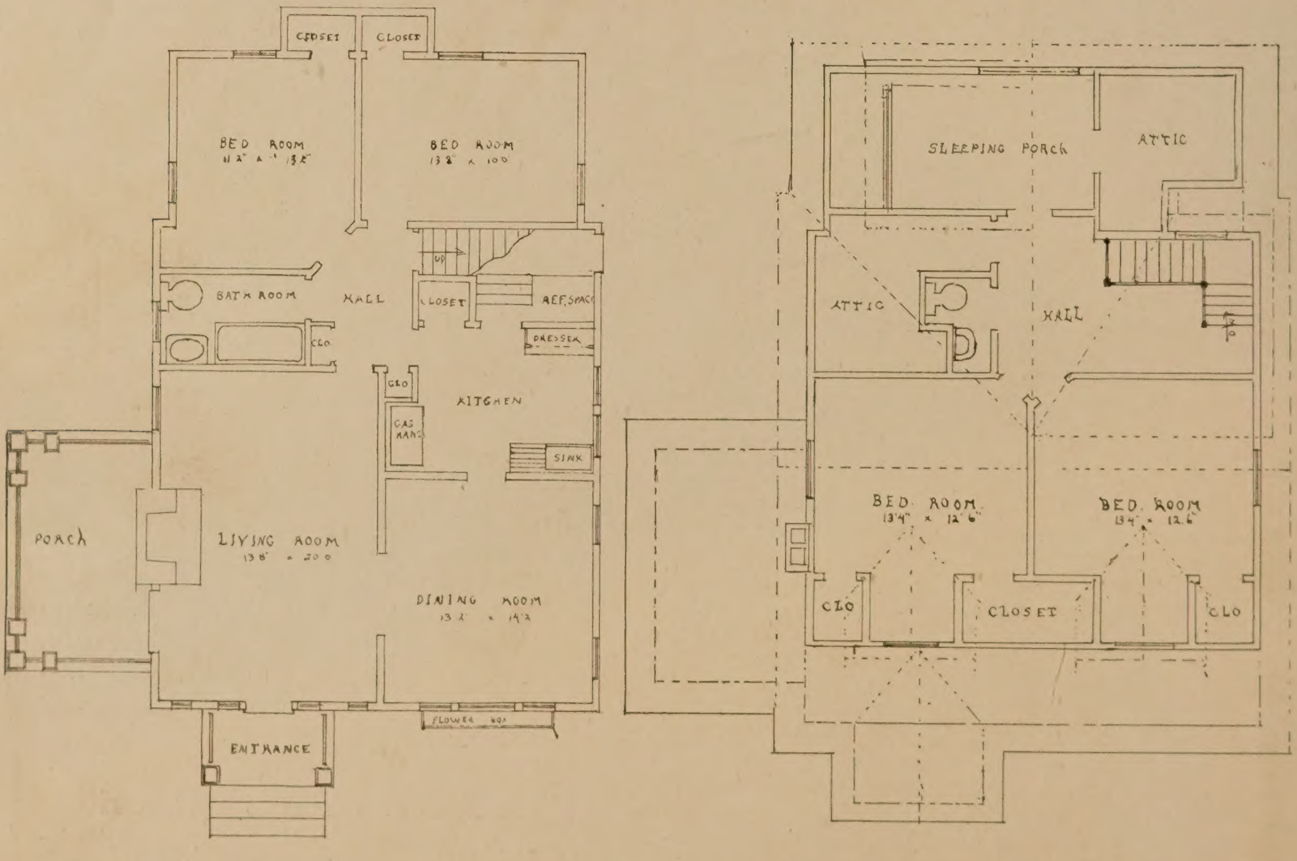
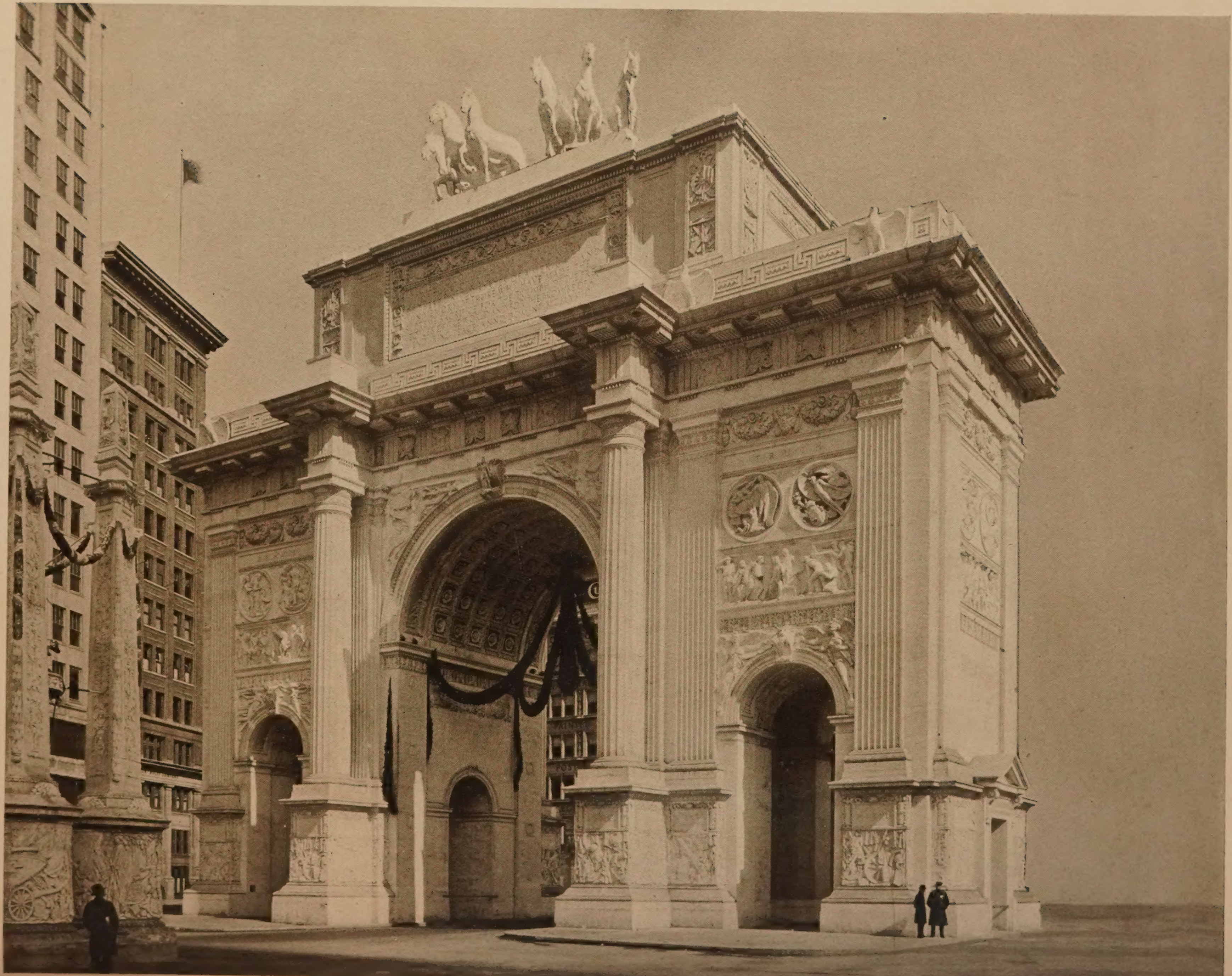




HOUSE AND PLANS, ARTHUR B. CURTISS, ELIZABETH, N. J.

Herman Fritz, Architect.



FROM THE SOUTH